AUTHORS.

ABSTRACTS A and B. 1937.

An asterisk denotes a previous abstract. Patents are marked (P.).

*Anonymous, acetic acid and acetic anhydride from acetylene, B., 415. Addition of acid sodium phosphate to table salt to correct phosphorus deficiency, A., III, 471. Denatured alcohol for the laboratory chemist, B., 177. Alcoholether [motor] fuel, B., 316. Use of alginic acid for soaps, B., 805. Effect of low temperatures on alloy iron, B., 1059. Alumina, for aluminium smelting, from non-bauxitic raw materials with special reference to nepheline, B., 236. Aluminium after fifty years, B., 355. Heat treatment of aluminium alloys, B., 1222. Aluminium foil by the Hazelett process, B., 687. Aluminium paint as primer on wood, B., 155. Soldering aluminium, B., 796. Identification of amytal, barbital, phenobarbital, and ethylhydrocupreine, B., 497. Detection of animal fats, B., 1232. Azochloroamide, B., 496. Ballistic permanence of B powders with a low coefficient of emission and of SD powders, B., 1279. Determination of small amounts of benzene in biology, A., III, 52. Scientific measurement in [iron] blast furnaces, B., 42. Bleaching and dyeing of raw materials for string, rope, cables, and brushes, B., 658. Bleaching of oils with bleaching earths, B., 1367. Determination of free ammonia in boiler feedwaters, etc., using the Hellige comparator, B., 853. Borax as insecticide, B., 297. Extraction of borax and boric acid from salt mixtures by flotation treatment, B., 540. Use of a chemical branding fluid for marking black cattle, B., 1391. Economic production of Dinas and silica bricks, B., 550. History of the synthetic camphor industry in the United States, B., 392. Cancer research in Great Britain, A., III, 58. Low-temperature carbonisation [of coal] at Bolsover [colliery], B., 1293. Carbonising coal by electricity, B., 860. Casein wool, B., 1032. Swelling and shrinking of nitrocellulose and cellulose acetate films; preparation of undeformable cellulose acetate films, B., 292. Destructive action [on cements] of water containing gypsum, B., 1344. Gas analysis in cement works, B., 1343. Driving chem-ical plant. III., B., 1283. Chlorination for cleansing bottles, [etc. for dairy use],

Anonymous-continued.

B., 723. Determination of cinchophen in presence of sodium bicarbonate, B., 497. Liquid purification [of coal gas], B., 201. Coconut oil soaps prepared by saponification with carbonate, B., 805. Uniform heating of coke ovens, B., 1293. Use of Collactivit in the sugar industry, B., 1392. Coloured concrete, B., 1055. Electrolytic copper plant, B., 1358. Layout for preparation of electrolytic copper, B., 247. Titration of copper with alkali cyanide solutions, A., I, 632. Can cotton entirely replace wood pulp in the viscose-rayon industry? B., 1187. What are coumarone resins and how are they tested? B., 155. Canning and bottling cream, B., 612. Sterilisation of bottled and canned cream, B., 387. Sour cream, B., 971. Whipping properties of cream, B., 1122. Crystallisation in theory and B., 1122. Crystansaton in caccy and practice, B., 1. Scientific control in the dairy, B., 610. Detergent powders, B., 256. DIN sensitivity and fine-grain development, B., 292. Assay of dinitrophenol, B., 415. Perfuming of liquid disinfectants, B., 624. Non-poisonous disinfecting fluids, B., 846. Standard test for distillation of gasoline, naphtha, kerosene, and similar petroleum products, B., 1297. Driers, B., 157. Resistance of seamless drill pipe against collapsing pressure, B., 852. Reserves with Rapidogen [azoic] dyes under aniline-black, B., 1195. Whito discharges on naphthol AS-BT brown dyeings, B., 1195. [Rôle of plastics in] electrical insulating materials, B., 693. Hardness of enamel and mode of presenting the control of the co paration, B., 548. Detection of hardened fats and train [marine-animal] oils, B., 151. Modern electrolytic treatment of fats [and oils], B., 57. Fibro, manufacture and uses, B., 331. Experimental film dryer, B., 735. Engobing and glazing of fireclay ware, B., 440. Chemglazing of fireclay ware, B., 440. Chemistry of the Fischer-Tropsch process, B., 641. Flavours and flavouring, B., 837. [Determination of] oil in flax seed, B., 463. Floor polishes, B., 1233. Determination of foaming power [of textile auxiliaries], B., 1196. [French] Interministerial Commission on Fuel Utilisation, B., 743. Determination of coefficients of friction by means of the coefficients of friction by means of the

* Entries arranged according to subjects.

Anonymous-continued. Vollet machine and influence of colloidal graphite in lubricating oils, B., 1299. Fusion-welding, B., 1219. Removal of organic sulphur compounds [from gas], B., 1001. Use of the Gehlhoff and Thomas specific-effect data in practice, B., 1048. Glass from potato meal, B., 466. Testing glass, B., 671. Formation of glass gall, B., 1204. Use of [sodium] of glass gail, B., 1204. Use of sodium sulphate in glass making, B., 780. Glazes for fireplace tiles, B., 1339. Coloured glazes, B., 781. Technique of hard-fire lustre glazes, B., 913. Matt and crystalline glazes for fireplace tiles, B., 547. Hæmoglobin and chlorophyll, A., III, 450. Determination of hexyl-resorcinol, B., 415. Chocolate ice cream. B., 723, 1123. Ice-cream mixes, B., 723. Freezing process [for ice cream], B., 972. Vegetable fats in ice cream, B., 723. Instrumentation studies. I. IV. Correlation of Thwing formation readings to visual formation gradings by the Mead [Paper Co.] standards. V. Report on gloss [of paper], B., 227. Com-position of electrically conducting lacquers, B., 261. Lauxite—a new urea resin, B., 588. Lead tetraethyl as anti-knock agent, B., 11. Measuring physical properties of leather, B., 1381. Preparing samples of leather for analysis, B., 1381. Specifications for delivery and testing of caustic magnesia (burned magnesite) for plaster, B., 904. Recommended practices for sand-cast magnesium alloys, B., 247. Manurial trials at agricultural stations, 1935. I. General. II. Nitrogen, phosphate, and potassium. III. Other elements, 166. Mayonnaise, B., 836. Nitrite in cured meats, B., 973. Metycaine, A., III, 217. Fat content of milk, B., 79. Judging and evaluating milk and milk products, B., 281. Maintaining freshness of milk, B., 79. Oxygen-pressure process for preserving milk, B., 281. Assay of vitamin-D milk, B., 489. New detergent for milk bottles, B., 387. Identification of apomorphine, hydrast ine, and theophylline, B., 497. Artificial mother-of-pearl pigments, B., 1086. Nickel cast irons in engineering, B., 350. Large manufacture of nickel-silver,

phosphor-bronze, and nickel anodes, B.,

Anonymous—continued.
578. Oil from coal process, B., 864.
Oil or cellulose filler? B., 155. Acidity of [Palestine] olive oil, B., 1079. Heat treatment of oils, B., 1233. Penetrating oils, B., 753. Cold test on refined oils, B., 806. Organic finishing media, B., 1086. Nitre efflorescences on paint films. I., B., 62. Silicated paints, B., 369. Physical specifications for wall paints, B., 369. Emulsion binding media [water paints], B., 944. Use of zincwhite paints for protection of machines and apparatus in chemical works, B., 369. Alkali-staining property of paper, B., 770. Control of [paper] weight and [stock] consistency, B., 1036. Rapid determination of jellying power of pectin, B., 283. Ammonia in petroleum refining, B., 314. Photographic and chemical foundations of the new colour-film processes, B., 89. Characterisation of [photographic] gradation properties, B., printing inks, B., 157. Testing of printing ink vehicles. I.—III., B., 157. 369. Printing vat colours on cotton-viscose piece goods, B., 432. Producer gas for heating coke ovens, B., 639. Application of alkyd resins, B., 466. Composition of synthetic resins and varnishes for the piano industry, B., 154. German synthetic resins, B., 259. Evaluation of natural resins, B., 588. Regeneration of old rubber, B., 1377. Synthetic rubbers, B., 949. Transparency of seamless rubber articles, B., 702. Benzine and latex in manufacture of seamless dipped [rubber] articles, B., 160. Crystallisation of sulphur from rubber cements, B., 372. Low sulphur versus normal sulphur in [rubber] compounds containing various loading materials, B., 372. Aims of rubber compounding. I.—IV., B., 371. Statex thread; rubber thread [produced] by a new process, B., 702. Vulcanisation for rubber] with sulphus oblaids in [of rubber] with sulphur chloride in modern works, B., 1245. Optimal vulcanisation [of rubber] and works heating, B., 703. Effect of decreasing sulphur [in vulcanised rubber] on tensile properties at 100°, B., 372. Significance of sulphur and accelerators for vulcanis-ation, B., 949. Benzine and latex in rubbering of fabrics, B., 432. Sausage rusk, B., 1125. Standardisation of the sexual hormone, A., III, 185. Hard soap manufacture, B., 1233. Sand and pumice soaps from fatty acids, B., 805. Sodium phenolate used in the removal of hydrogen sulphide from refinery gas, B., 867. Decoration of stoneware, B., 1340. Determination of traces of sugar in drain and waste waters, B., 505. Photoelectric device for indicating or recording traces of sugar, B., 1114. Continuous [sugar-beet] diffusion by the Bergé system, B., 173. Crown rot in sugar beet, B., 274. Sweeping compounds [as floor elevents.] floor cleaners], B., 1056. Continuous distillation plant for road tar, B., 406. Determination of copper and manganese in textiles, B., 773. [Measurement of] thermal conductivity of textile fibres, B., 1185. Finishing processes in textile treatment, B., 538. Assay of theophyl-

Anonymous—continued.

line, B., 497. Determination of total chlorides in tomato juice, B., 493. Tung oil, its occurrence, production, and uses, B., 152. Protective device for vacuum pumps in tar-distillation plants, B., 640. Vacuum producers, B., 854. Remote valve operation, B., 853. Varnishes for paper, B., 590. Varnish coatings for chemical resistance, B., 1089. Canned vegetables, B., 974. Microscopical detection of viscose silk mixed with cotton and other textile fibres, B., 768. [Viscose] staple fibre, B., 25. Electrolytic preparation of heavy water; relation between electric current density and isotopic separation coefficient, A., I, 253. Production and uses of wool greases, B., 1079.

Aabye, J. S., and Rasmussen, O. V., [tanning] experiments with so-called ashfree sulphite-cellulose waste extracts, B., 817.

Aall, C., influence of impurities silica, alumina, and magnesia on m.p. of calcium carbide, A., I, 242. Solubility of impurities silica, alumina, and magnesia in commercial calcium carbide, B., 235. Influence of magnesia on operation of a [calcium] carbide furnace, B., 903.

Aamark, K., Boren, B., and Westgren, A., crystal structure of Mn_sSi₃, A., I, 118.

Aarhus Oliefabrik A./S., and Christensen,
C. E., extraction and concentration of

vitamins, (P.), B., 499. Aarnio, B., Gyttia soils, B., 476. [Composition of Finnish clays], B., 593.

Abadi, A. See Villaret, M. Abadie, (Mlle.) G. See Dauthy, M. E.

Abadie, P. See Girard, P.
Abakumovskaja, L. N. See Nametkin,

Abbasy, M. A., diuretic action of vitamin-C, A., III, 154.

Harris, L. J., and Ellman, P., vitamin-C and infection; excretion of vitamin-C in pulmonary tuberculosis and in rheumatoid arthritis, A., III, 343.

Harris, L. J., and Hill, N. G., vitamin-C

and infection; excretion of vitamin-C in osteomyelitis, A., III, 342.

Abbate, M. See Orestano, G. Abbishaw, A. V., and Parker, W. G., cooling of gaseous products of destructive distillation, (P.), B., 410.

Abbot, E. B., McKenzie, A., and Ross, J. D. M., m.p. graphs of bornyl fumarates, A., 11, 108.

McKenzie, A., and Stewart, P. A.,

isomeric menthyl o-nitromandelates,

A., II, 192. Abbott, E. J. See Bousky, S.

Abbott, J. See Pratt, W. B.
Abbott, L. D., jun. See Gaebler, O. H.
Abbott, W. O., and Miller, T. G., intubation

of the human small intestine, A., III,

See also Carr, W. G.

Abbott Laboratories, thiobarbituric acid compounds, (P.), B., 290.
See also Raiziss, C. W., and Volwiler,

E. H., Abbott Machine Co., apparatus for fluid treatment of yarns and other fibrous materials, (P.), B., 130.

Abderhalden, E., action of ascorbic acid on amino-acids. I. Detection of histidine. II., A., II, 371. Application of drop reaction to the ninhydrin test, A., III, 288. Action of gastric juice, h., 11, 288. Action of gastric lifes, pepsin-hydrochloric acid, trypsin-kinase, pancreatic juice, and pancreatin on proteins, A., III, 393. Detection of defence proteinases in urine, A., III, 393. Stability of defence proteinases of dried serum, A., III, 393. Effect of administration of vitamins on production of defence

proteinases, A., III, 403.

and Baertich, E., deamination of glycine by "omega" [catalyst], A., III, 384.

and Bahn, A., l(+)-a-aminobutyric acid as constituent of proteins, A., II,

and Greif, P., preparation of amino-

138.

polypeptidase, A., III, 393. and Hanson, H., fate of racemic aminoacids in the animal organism, A., III, 382. Polypeptidases of blood-plasma, A., III, 393.

and Leinert, F., effect of gastric juice on diketopiperazines, A., III, 393.

and Murke, H., β -hydroxyglutamic acid, A., II, 371.

and Shimidzu, G., hormone action in the light of protective proteinase reaction, A., III, 37.

Abderhalden, R., production of protective roteinases after parenteral injection of killed bacteria, A., III, 36. Action of pepsin-hydrochloric acid, gastric juice, trypsin, and erepsin, and of the zones of pH within which these enzymes act, on pyrrolidonecarboxylic acid and its amide, A., III, 393. Polypeptidases in

milk, A., III, 393.

Abdoosh, Y. B., sensitivity of different strains of typhoid bacilli to the bactericidal action of natural and immune sera, A., III, 414.

Abe, M. See Uemura, T., and Yamamoto,

Kenichi.

Abe, S., theory of activity coefficient for strong electrolytes in concentrated solution. I., A., I, 411.

Abe, Y., colorimetric micro-determination of deoxycholic acid and cholic acid in

bile, A., III, 377.

Abel, E., kinetics of oxidation of ferrous ions by nitric acid, A., I, 142.

[with Jokisch, R., Larisch, R., and Sassmann, H.], "active oxalic acid,"

A., I, 525.

and Fabian, F., micro-titration by K. Schwarz' method and a micro-pressure pipette, A., I, 635.

and Halla, F., anomalous behaviour of mortar coats, B., 442.

and Proisl, J., mechanism of the leadchamber reaction. II. Reaction between sulphurous and nitrous acids under various conditions, B., 776.

Abelin, I., tyrosine and thyroxine, A., III, 76. Vitamin-H, A., III, 498.

III, 76. Vitamin-H, A., III, 498.

Abell, R. G., rate of removal of urea by living blood capillaries from extravascular solutions in transparent moat chambers introduced into the rabbit's

ear, A., III, 452.

Abels, J. C., calcium-binding power of ovalbumin, A., III, 88. Determination of acctone in blood and urine, A., III, 336.

See also Moyer, L. S., and Ponder, E. Abelson, P. See Cook, S. F.

Abercrombie, W. F., histological effects of potassium iodide and thyroid substance on guinea-pig thyroid in experimental scurvy, A., III, 125.
Abernethy, J. W., Smyer, S. J., and Kuhn,

A. B., treatment of friction fabric,

(P.), B., 664.

Abernethy, P. A., gas-cleaning problems, B., 639.

Abhyankar, V. S. See Sahasrabuddhe,

Abiko, Y. See Lauer, K.

Abilene Cotton Oil Co. See Mackenzie, A. S.

Abinder, G. A., fire and explosion hazards in connexion with ammonium nitrate, B., 339.

Abker, $H_{\cdot \cdot \cdot}$ lining of basic and acid open-hearth furnaces. II. Acid, B.,

Abkin, G. L., technique of preparing ultrafilters and their use in analytical chemistry, A., I, 268.

and Liepatov, S. M., ultrafiltration

apparatus, A., I, 202.
Abletzova, T. A. See Rodionov, V. M.
Ablezova, K., and Zellinskaja, T., promotion of metallic nickel layers by oxy-

gen, A., I, 369.

Ablov, A., action of primary aromatic amines on 1:6-dichlorodicthylenediamminocobaltic chloride, A., II, 286. Dipolar complex salts, A., II, 389. Action of primary amines on dibromodiethylenediamine cobaltibromide, A., II,

Abo, K., iodine contents of blood of rabbits fed exclusively on polished rice, A., III,

Aborn, R. H. See Bain, E. C.

Abragam, D., and Deux, Y., addition of hypochlorous acid to phenylbutadiene and isomerisation of the corresponding epoxide to phenylcrotonaldehyde, A., II, 415.

Abraham, E. P., Mowat, E. L. R., and Smith, J. C., addition of hydrogen bromide to non-terminal double bonds, A., II, 319.

and Robinson, R., crystallisation of lysozyme, A., III, 354.
and Smith, J. C., addition of hydrogen chloride and iodide to olefines; undecenoic acid, A., II, 4.

Abraham, L., reactions between coagulating acids and proteins, A., III, 290.

Abrahamczik, E., modification of the Friedrich absorption apparatus for micro-carbon-hydrogen determination, A., II, 358.

Abrahams, S. A., and Plant Rubber & Asbestos Works, basic magnesium car-

bonate, (P.), B., 238.

Abrahamson, E. M., securing blood for [micro-]analysis, A., III, 413.

Abram, H. H., influence of vanadium on nickel-chromium and nickel-chromiummolybdenum steels, B., 46.

Abramo, F. See Azzarello, E. Abramov, G. A., electrometallurgy of aluminium, B., 52.

Abramov, N. M., and Dolgov, B. N., catalytic dehydrogenation of alcohols to yield esters. VI. Mechanism of esterification of isoamyl alcohol, A., II,

Abramov, S. N., determination of fusibility of ash from solid fuel, B., 637. See also Neimark, M. E.

Abrams, A. J. Sec Curtis, H. A.

Abramson, H. A., and Moyer, L. S., recent developments in electrokinetic methods and their application to biology and medicine, A., III, 334.

Moyer, L. S., and Voet, A., vertical micro-electrophoresis cell with nonpolarisable electrodes, A., I, 100. Abramtschuk, N. A. See Jermolenko,

N. F.

Abrasine Products, Inc. See Walker, C. R.

Accardo, A. See Azzarello, E. Accoyer, P. See Delaunay, H.

Accumulatoren-Fabrik Akt.-Ges., pipettes [for accumulators], (P.), B., Electrical batteries, (P.), B., 937. ous metal bodies, (P.), B., 1228. Por-

ceta Ges.m.b.H., saponification of materials made from cellulose esters, Aceta (P.), B., 28. Artificial silk, films, and similar products, (P.), B., 28. Artificial fibres, threads, fabrics, films, etc., (P.), B., 64. Dyeing of artificial shaped objects, (P.), B., 337. Shaped materials from highly polymeric companying for materials from highly polymeric companying for the silicial (P.) P. 460. pounds [e.g., acetate silk], (P.), B., 469. Treatment of materials capable of penetration by gas with gases or vapours, (P.), B., 635. Organic compounds [wetting agents, etc.], of high mol. wt. containing basic substituents, (P.), B., 652. Increasing reactivity of shaped articles or materials containing protein substances [wool, etc.], (P.), B., 899. Treatment of materials for varying their affinity [for dyes], (P.), B., 1328. Process of dyeing, (P.), B., 1328. Process for increasing the reactivity of naturally or artificially shaped articles or materials [of wool, viscose, etc.], (P.), B., 1328.

Ach, L., Dirscherl, W., and Rare Chemicals, [female] sexual hormone derivatives.

(P.), B., 289.

Achard, C., Boutaric, A., and Berthier, P. viscosity of bile solutions, A., III,

Boutaric, A., and Roy. (Mme.) M., dilution of scrum with dilute solutions of various pH, A., III, 83. Optical activity of sera and of solutions of their proteins separated by the cold acetone method, A., III, 290.

Boutaric, A., and Thevenet, S., viscosity of solutions of different serum-pro-

teins, A., III, 248.

and Piettre, M., blood serum and muscleplasma of the fœtus, A., III, 111. Plasma of smooth muscle; treatment with acetone at low temperatures, A., III, 295.

Acharya, B. N., and Devadatta, S. C., different types of phosphorus compounds in milk, A., III, 417.

Patel, A. M., and Desai, B. N., conductivity and cataphoretic speed measurements of benzopurpurin 4B, Congored, and sky-blue F.F., A., I, 139.

Acharya, C. N., determination of furfur-aldehyde yield of soils and plant mater-ials, A., Ill, 448. Determination of cellulose in the soil, B., 819.

Acharya, H. K., properties of activated sugar charcoal coated with various substances. I. and II., A., I, 234, 457.

Achieser, A., and Pomerantschuk, coherent scattering of y-rays at nuclei, A., I, 438.

Achille, P., manufacture of sodium and some sodium compounds in Italy, Achilles, O., synthetic resin bearings, B., 259.

Achmatov, A. S., and Baruischanskaja-Landsberg, F. S., kinetics of photochemical synthesis in solutions of formaldehyde in ultra-violet light, A., I, 39.

Achmed, H. H. See Borchard, K. H. Achrap, L. K. See Voinilovitsch, G. I. Achumov, E. I., and Derjabina, N. V.

electrolysis of sodium nitrite in liquid ammonia, A., I, 33.

and Druziakova, L. I., electrolysis of potassium bromide in liquid ammonia,

A., I, 311.

and Ezerova, E. A., electrolysis of sodium chloride in liquid ammonia. III. Solubility in the ternary system NaCl-NH₄Cl-NH₃, A., I, 137.

and Vassiliev, B. B., binary system NH₄Cl-H₂O, A., I, 82.

Aciéries de Gennevilliers Anc. Établ. Delachaux. See Delachaux, C. L.

Acken, M. F. See Du Pont de Nemours & Co., E. I.

Acker, A. See Maillard, A. Acker, E. van, intravenous anæsthesia with

evipan, A., III, 25.

Acker, J. T. See Bell Telephone Labs. Ackerman, A. J., control of codling moth by use of oil sprays, B., 1389.

Ackermann, D., identification of bases in animal tissues, A., III, 168.

and Mohr, M., nitrogenous constituents of liver of the shark, Acanthias vul-

garis, A., III, 167.

Ackermann, J., determination of small amounts of lipins in animal organs, A., III, 87. Histo-chemical investigation of lecithin metabolism in animals. I. Resorption of lecithin in the gut, A., 111, 91.

Ackermann, P., hydrogenation of acetylene

to ethylene, A., II, 438.

Ackerson, C. W., Blish, M.J., and Mussehl, F. E., utilisation of nitrogen, calcium, and phosphorus by the growing chick, B., 185.

Ackley, R. A., and Walters, F. M., jun., precision recording dilatometer, B., 96. Acme Chemical Co., Ltd. See Hawes, G.W.

Acme Rayon Corporation. See Huttinger, C. A.

Acquistapace, C., portable apparatus for rapidly filtering and purifying liquids, (P.), B., 994.

Acree, R. J., and Goss, W. H., microchemical colorimetric $p_{\rm H}$ procedure for differentiating the telia of Cronartium ribicola and C. occidentale, A., III, 485.

Acree, S. F. See Hamer, W. J., Hughes, (Miss) E. E., and Wingfield, B. Acton, W. See Morris, S.

Adadurov, I. E., Andrussov's theory of catalytic preparation of hydrocyanic acid, A., I, 90. Catalysis by fused substances, A., I, 252. Influence of the carrier on catalysts, A., I, 469. Rôle of carriers in catalysis, A., I, 573. Causes of loss of platinum in oxidation of ammonia at a platinum gauze, B., 33. Contact activity of chromium oxide in oxidation of sulphur dioxide to sulphur trioxide, B., 778. Causes of corrosion of platinum gauze, B., 1066. Preventing loss of platinum [catalyst], B., 1198.

Atroschenko, V. I., and Konvisor, V. I., loss of platinum in oxidation of ammonia by a steam-oxygen mixture,

B., 33.

Adadurov, I. E., and Fomitscheva, T. L., influence of added substances on space-lattice and activity of chromium catalysts, A., I, 37. Vanadiumthallium catalyst and its properties, B., 1199.

and Gernet, D. V., influence of SO2 and SO3 on activity of tin-chromium cata-

lysts, A., I, 315.

and Grigoriev, B. A., activity of cokes towards carbon dioxide, B., 8. and Grigorovitsch, N. M., decrease in

activity and change in lattice constant of poisoned catalysts, A., I, 368. and Konvisor, V. I., cause of coloration

of nitric acid during production, B.,

901.

and Kraini, P.J., constancy of difference in heats of activation on dehydration of ethyl, n-propyl, and isobutyl alcohols on various catalysts, A., I, 37.

Orlova, I. M., Fomitscheva, T. L., and Tzeitlin, A. N., black precipitate (Fe_3O_4) from β -naphthylamine production as a carrier for platinum in contact oxidation of SO₂, B., 436.

and Pevni, N. I., absorption of hydrogen by rhodium, A., I, 561. Adsorption of oxygen and sulphur dioxide on chromic oxide, after and before poisoning by arsenic, A., I, 561. Absorption capacity of silver, rhodium, and tungsten for hydrogen, and stability of gauzes made of their alloys with platinum in ammonia oxidation, A., I,

Rivlin, I. I., and Kovalev, H. M., influence of carrier on which catalyst is deposited on direction of reactions,

A., I, 143.

and Tzeitlin, A. N., corrosion of lead in the tower process, B., 338. Use of iron pipes in the tower sulphuric acid process, B., 338. Action of hydrogen fluoride on vanadium-barium catalysts for oxidation of sulphur dioxide, B., 1335.

Tzeitlin, A. N., and Fomitscheva, T. L., application of pre-catalysts in making contact sulphuric acid, B., 901.

and Tzeitlin, L. N., rapid interferometric determination of nitrogen oxides, B., 436.

Adair, G. S., theory of membrane equilibrium, A., I, 512. See also Roughton, F. J. W.

Adam, F., and Birrer, A., water test in Lake of Lucerne, B., 1139.

Adam, H., angular distribution of the electron-positron pairs liberated by the action of hard y-rays on lead, A., I, 106,

See also Traubenberg, H. R. von. Adam, H. R., and Wartenweiler, F., flot-

ation of banket sands, B., 449. Adam, N. K., determining lowering of tension of exposed water surfaces; surface tension of the sea and of inland waters, A., I, 300. Use of the word substrate, A., I, 511. Detergent action and its relation to wetting and emulsification, B., 805.

Adam, W. B., diffusion of acid and sugars during processing and storage of canned fruits, B., 283. Acidity and p_H of English canned fruits, B., 1126. and Horner, G., tin content of English

canned fruits and vegetables, B., 1402. and Siddappa, G. S., composition and texture of dried peas, B., 1125.

Adam, W. B., and Stanworth, J., effect of internal pressures on volume of cans, B., 990.

See also Hirst, F., and Siddappa, G. S. Adam, W. G., and Potter, F. M., [coal-tar distillation], B., 313.

Potter, F. M., and Murdoch, D. G., nontoxic road tar, B., 747.

See also Gas Light & Coke Co.

Adamanis, F. See Hrynakowski, K. Adamczewski, I., electrical conductivity of dielectric liquids ionised by X-rays, A., I., 64.

Adamek, V., manganese in ash of spruce trees, A., III, 330.

Adamovitsch, D., drying of chlorine, B., 236. Best concentration of sodium chloride for the alkali-chlorine cell, B., 435.

Adamovitsch, L. P., appliance for testing corrosion, with periodic filling, and

also with flowing solutions, B., 688. and Guiva, A. M., zinc-plating of iron in acid electrolytes, B., 579.

and Volkov, N. R., automatic null-point adjustment device for titration, A., I, 480.

Adamovitsch, V. V. Sec Schemjakin, F. M.

Adams, A. E., and Ward, E. N., effect of hypophysectomy and of phyone injections on pancreas and liver of the newt, A., III, 39.

Adams, C. E. See Bahlke, W. H. Adams, D. A. W. See Rowe, F. M.

Adams, E. W. See Standard Oil Co. Adams, F. W., and Edmonds, R. G., absorption of chlorine by water in a

packed tower, B., 906.
and Witham, G. S., jun., cooking of pulp, (P.), B., 536. Paper pulp, (P.), B., 1193.

Adams, G. A., ultra-violet spectrum of hæmoglobin and its derivatives, A., I, 8. Adams, G. O., and Kingsbury, F. H., experiences with chlorinating new watermains, B., 985.

Adams, J. A. See Snipes, B. T Adams, J. E. See Jordan, H. V. Adams, J. F. See Nikitin, A. A.

Adams, J. R. See Whittaker, C. W.

Adams, L. H., Goranson, R. W., and Gibson, R. E., manganin resistance pressure gauge, A., I, 537.

Adams, L. M., and Brown, D. J., standard state of conpens

state of copper; copper-cupric electrode, A., I, 465.

Adams, M., Power, M. H., and Boothby, W. M., urine at hourly intervals after the administration of glycine, A., III,

See also Welch, C. S., and Wilder, R. M.

Adams, M. A. See Taylor, F. H. L. Adams, O. P., Phillips, C. D., Vorce, J. E., and Nat. Tube Co., apparatus for determining fluid density, (P.), B., 308.

Adams, P. A., oxygen uptake and composition of skin of rats in vitamin-B2

deficiency, A., III, 77.
Adams, R. See Campbell, K. N., Kinney, C. R., McGrew, F. C., Miller, Richard Froman, and Morris, R. C.

Adams, R. S. See Cameron, D. H. Adams, W. L. See Einsel, I. H. Adamson, D. C. M. See Stanford, K.

Adamson, D. W., and Kenner, J., improved preparations of aliphatic diazo-compounds and certain of their properties, A., II, 449.

Adamson, P.S., McQuillin, F.J., Robinson, R., and Simonsen, J.L., synthetic cyperones and their comparison with a- and β-cyperones, A., II, 461. Adamson, W. A. See Du Pont de Nemours

& Co., E. I.

Adan, C. N., protein supplements in poultry rations. VI. Influence of mungo in rations for chicks, A., III, 467.

Adant, M. See Dulière, W. L.

Adcock, F., iron-carbon constitutional diagram. I., A., I, 297.

Addington, L. H. See Cunningham, O. C.

Addis, H. W. See Davies, W. C.

Addis, T., Poo, L. J., and Lew, W., rate of protein formation in organs and tissues.

I. After caseinogen feeding, A., III, 17. Addison, $C.\ C.$ See Powney, J.Addoms, R. M., nutritional studies of loblolly pine, A., III, 238.

Adel, A., and Slipher, V. M., Fraunhofer's spectrum from 77,000 to 110,000 A, A., I, 105.

Adelson, D. E., and Bogert, M. T., retene. VII. Fluorenones and phenanthridones from retenediphenic acid. VIII. Synthesis of 3'-methyl-5:6-cyclopentenoretene [1:3'-dimethyl-7-isopropyl-5:6-cyclo-pentenophenanthrene]. IX. Synthesis of 5:6-benzoretene and its derivatives, A., II, 19, 154, 503. Synthesis of 5:6-(3'-methylcyclopenteno)retene, a compound structurally related to Diels' hydrocarbon, A., II, 184.

Adenstedt, H. See Grüneisen, E.

Adickes, F., hydrolysis, A., II, 133.

Plessmann, F., and Schmidt, P., re-esterification of carboxylic esters. I., A., II, 481.

Adico Development Corporation. See Goosmann, $J. \tilde{C}$.

Adkins, H., contact catalysts, (P.), B., 667. and Cramer, H. I., catalytic synthesis of heterocyclic amines, (P.), B., 1178.

and Winans, C. F., catalytic synthesis of amines, (P.), B., 760. See also Durland, J. R., Hatch, G. B.,

Paden, J. H., and Saner, J. Adler, Edward. See Lehrman, A.

Adler, Erich, Calvet, F., Euler, H. von, and Gunther, G., phosphorylation and oxido-reduction during degradation of glucose in the brain, A., III, 270.

Calvet, F., and Günther, G., inhibition by glyceraldehyde of glycolytic degradation of carbohydrates, A., III, 431.

Euler, H. von, and Hellström, H., action of cozymase as the specific co-enzyme of lactic dehydrogenase from heart muscle, A., III, 68.

and Sreenivasaya, M., components of dehydrogenase systems. XVI. Formic acid- and alcohol-dehydrogenase from seeds, A., III, 428. See also Euler, H. von, and Hellström, H.

Adler, R., alkalising or deacidifying water by means of lime, (P.), B., 739.

Adler, Siegfried. See Jacoby, M.

Adler, Sol. See Hayman, D. F. Adlington, G. S., and White, L. A., [fire-proof] celluloid, (P.), B., 157.

Adolf, \tilde{G} . See Haas, J.

Adolph, E. F., differential permeability to water and osmotic exchanges in the marine worm Phascolosoma, A., III, 474. Adolph, W. H. See Hsn, P. C.

Adriaens, L., oleaginous plants of the Belgian Congo. II. Oil of Omphatocarpum boyankombo. III. Oil of Antranella congolensis, B., 586.

Adrian, W., economy of material by welding, B., 688.

Adt Co., J. B. See Zeun, L. H.

Adzumi, H., flow of gaseous mixtures through capillaries. I. Viscosity of binary gaseous mixtures. II. Molecular flow of gaseous mixtures. III. Flow at medium pressures, A., I, 405, 458. Flow of gases through a porous wall, A., I,

Aeckerlein, G., investigation of the interior of the earth by emanation determinations,

A., I, 384.

Afanasiev, B. N., direct determination of oxygen in organic substances, A., II, 128. Direct determination of oxygen in coal and other solid fuels, B., 1151.

Afanasiev, M. V. See Bruk, A. S. Afanasiev, P. V., catalytic oxidation of iodides by persulphates. I. Mechanism of the oxidation. II. Homogeneous catalysis of the reaction by organic catalysts, A., I, 624.
Talmud, B. A., and Talmud, D. L.,

orientation of molecules in surface layer of an adsorbent, and the adsorption of gases. I., A., I, 130.

Afanasieva, A. V., and Timofeev, P. W.secondary electron emission from oxidised silver and molybdenum surfaces, A., I,

Afanassieva, A. S., action of X-rays on cell elements of spring wheat, A., III,

Afferni, I. E., oxidation of unsaturated hydrocarbons by atmospheric oxygen, A., II, 479.

African Explosives & Industries, Ltd., preparation of cylinders of plastic or semiplastic material of predetermined length and diameter and for wrapping same, (P.), B., 702.

Afzelius, I. Sec Scheele, C. von.

Aganin, B. M., calculation of a heat exchange of a contact apparatus for oxidation of ammonia, B., 902.

Agar, W. M., and Emendorfer, E. H., manganiferous prochlorite from Hawley-

ville, Conn., A., I, 431.

Agarwal, R. R., Cuscuta reflexa, Roxb.

IV. Isolation of a new yellow flavone colouring matter from the seeds, A.,

and Dutt, S., synthetic coumarins. I. Coumarins derived from resacctophenone, A., II, 299. Bark of Terminalia arjuna, Bedd. II. Isolation arjunetin from the alcohol extract, A., III, 331.

Agasote Millboard Co., fire-resistant porous insulating material, (P.), B., 1145.

See also Becher, H. L.
Agasse-Lafont, E. See Grimberg, A.

Agatov, P. See Kiesel, A. Agde, G., and Hubertus, R., colloidal structure of bituminous coals, B., 310.

Ageev, N. V., physico-chemical study of intermetallic molecular solid solutions, A., I, 558.

and Ageeva, V. A., solid solutions of

indium and lead, A., I, 233. and Krotov, I. V., solid solution of antimony in lead, A., I, 73.

and Kuznetzov, V. G., roentgenographic study of alloys of magnesium and silver, A., I, 508.

Ageeva, V. A. See Ageev, N. V. Aggeler, P. M. See Lucia, S. P. Aggéry, B. See Nicolas, G. Agid, R. See Minz, B.

Aglitzki, V. A., and Scharova, A. K., conditions of preparation of copper sulphate from impure electrolyte, B., 905.

Agosta, G., effect of surgical operation on urinary excretion of sulphur, A., IlI,

and Bilotti, L., effect of surgical operation on blood-glutathione, A., III, 462.

Agostini, P., and Baldazzi, T., loss of magnesium in systematic qualitative analysis, A., I, 46. Agratscheva, P. A. See Volski, A. N.

Agren, G., preparation of trypsin-free aminopolypeptidase, A., III, 269.

and Hammarsten, E., multiple nature of crystalline pepsin, A., III, 429.

Agroskin, A., coke ovens of the system

Koppe-standard with the standard

form, B., 7.

Aronov, S., Dmitriev, G., and Kopeliovitsch, I., commercial coking of Tkvartschelski and Tkvibulski coals, B., 104.

Aguado, A. See Del Fresno, C. Aguado, J. G., and Piña de Rubies, S., are spectra of the platinum group in concentrations of 5×10^{-4} , 5×10^{-5} , 5×10^{-6} , 5×10^{-7} , and 5×10^{-8} gram, A., I, 336.

Aguanta, I. M., comparison of rice bran and maize bran as feeds for growing and fattening pigs, B., 725.

Aguirrezabala, J. See Randoin, L.

Aguzzi, A. See Crippa, G. B.
Ahlberg, J. E., Blanchard, E. R., and
Lundberg, W. O., electron activation in crystals: heat capacities of $Sm_2(SO_4)_3,8H_2O$ and $Nd_2(SO_4)_3,8H_2O$ from 3° to 40° abs., A., I, 452. Heat capacities of benzene, methyl alcohol, and glycerol at very low temperatures, A., I, 452.

See also Lord, R. C., jun., and Lundberg, W.O.

Ahlborg, K. See Myrback, K.

Ahlen, A. van, removal of clay from coal slurries by flotation, B., 101.

Ahlgren, H. L. See Mortimer, G. B. Ahlmann, N., heating or cooling of pul-verulent materials, (P.), B., 197. Treatment of slurry prior to calcination or calcination and sintering, (P.), B., 1287.

Ahlquist, H., consumption of oxidising agents by wood cellulose, B., 534. Ahlström, C. G. See Andrewes, C. H.

Ahmad, B., Mullick, D. N., and Majumdar, B. N., carotene content of some common Bengali food stuffs, A., III, 363.

See also Wilson, H. E. C. Ahmad, G. See Singh, B.

Ahmad, S. Z., and Desai, R. D., heterocyclic compounds. I. Coumarins from 2-carbethoxycyclopentanone and 2-carbethoxy-4-methylcyclopentanone. Synthesis of 5-keto-2:3:5:6-tctrahydroa-quinindene derivatives. III. Synthesis of cyclopenteno-1':2':2:3-chromones and a discussion on the mechanism of the Pechmann and Simonis reactions, A., II, 256, 431, 464.

Ahmann, C. F. See Neal, W. M. Aho, V., colorimetric determination of potassium in soil extracts, B., 270.

Ahrens, G., emulsions for miniature photography, B., 292.
Ahuja, M. L. See Taylor, J.

Aicher, A. A. See Robinson Bindley Processes.

Aickin, R. G., detection of bromide and iodide in presence of large quantities of chloride, A., I, 529. and Bayliss, N. S., continuous absorp-

tion spectrum of chlorine in the region

4000-5000 A, A., I, 485. Aidinjan, N., and Verschkovski, V. I., rapid determination of metallic lead in litharge, B., 1045. See also Smirnov, V.

Aidinjan, R. K., influence of phosphates on cation exchange capacity of fundamental soil types of the U.S.S.R., B., 707.

Ainley, A. D., and Robinson, R., interaction of arylated unsaturated substances with diazonium salts, A., II, 188. Nitro-genous anthocyanins. III. Preliminary experiments with betanidin. V. Synthesis of substituted aminoflavylium salts, A., II, 206. Ainsa, G. F., centrifugal-type reduction

mill, (P.), B., 1146.

Ainslie, R. A., uses and limitations of some paper-testing instruments, B., 228.

Air-Maze Corporation. See Schaaf, A. E. Air Reduction Co., Inc., apparatus for removing metal by fusion, (P.), B., 454. Metal tubing from skelp, (P.), B., 459.

Wilkinson, W., and Schlitt, J. L., separating constituents of gaseous [hydrocarbon] mixtures, (P.), B., 115.
See also Rooke, R. M., Schlitt, J. L.,

Van Nuys, C. C., and Wilkinson, W.

Aird, R. B., and Naffziger, H. C., experimental injection of ethyl alcohol into the lumbar subarachnoid space, A., III,

Airola, A. K., standard solution for $p_{\rm H}$ measurements, A., I, 196, 260. Diffusion potential, A., I, 520. See also Kauko, Y.

Airoldi, M., classification of "pelagosite" as a new type of calcareous alga, A., I, 156.

Airoldi, R. See Carli, B. Aitken, I. M. E., polariscopes, (P.), B.,

Aitken, J. E., mineral constituents of

paper, B., 894.
Aitken, T. R., Fisher, M. H., and Geddes, W. F., effect on loaf volume of proving doughs to a definite height as compared with for a fixed time, B., 609.

See also Geddes, W. F. Aitoff, M., change in fermentation re-actions of a dysentery bacillus by passage through animals, A., III, 146. Dissociation in vivo and in vitro of the bactericidal action of 8-hydroxyquinoline

sulphate, A., III, 228.

Aivazov, B. V., and Neuman, M. B., inflammation of gaseous mixtures. VII. Induction period of cold flames in pentane-oxygen mixtures. VIII. Two-stage mechanism of low-temperature self-inflammation of pentane, A., I, 247, 366. Two-stage mechanism for lowtemperature spontaneous combustion of hydrocarbons, A., I, 313.

Aiyar, S. P., agriculturally important soils of Burma, B., 593.

Aiyar, S. S., and Krishnan, P. S., determination of mechanical wood pulp in paper, B., 1322.

Aizenberg, L. N., Jerusalem artichoke, B.,

Aizenschtadt, E. I., semi-micro-determination of arsenic in organic compounds, A., II, 476.

Aizikovitsch, M. A. See Salkind, J. S. Ajello, T., action of hydrazine hydrochloride on oximinotriphenylpyrrole. IV. and V., A., II, 30. Preparation of triphenylpyrrylhydroxylamines, A., II, 31. Action of semicarbazide hydrochloride on oximinotriphenylpyrrole. VI., A., II, 264. Oximinopyrroles. VII. Synthesis of phenylbenzylfurazan, A., II, 524.

and Gianferrara, S., action of hydrazine hydrochloride on oximinotriphenyl-

pyrrole. III., A., II, 30.

Ajinomoto Honpo Kabushiki Kaisha Suzuki Shoten, phenol-aldehyde condensation products, (P.), B., 1374.

Ajon, G., reciprocal reaction between chlorides, A., I, 256.

Ajtai, M. See Szebellédy, L.

Akabori, S., and Maeda, S., resistance of diketopiperazinepropionie acid to fission by proteinases, A., II, 390.

and Okahara, K., chemical nature of taka-amylase. I. Enzymic digestion of taka-amylase by proteases, A., III,

and Takase, S., specificity of proteinases, A., III, 68.

See also Toi, V. B.

Akai, S., and Matsnkawa, T., constituents of Epimedium macranthum, Morr and Decne. II. Constitution of a new flavone glucoside; relationship between icaritin, anhydroicaritin, and β-anhydroicaritin and oxidation of anhydroicaritin, A., II, 7.

and Nakazawa, K., constituents of Epimedium macranthum, Morr and Decne. III. Synthesis of anhydroicaritol and anhydroicaritin trimethyl ether, A.,

II, 7.

Akai, Y. See Fuseya, G.

Akamatu, H., and Sameshima, J., oiliness of liquids. II. Friction coefficients of films of uni- and multi-molecular layers, A., I, 130.

See also Sameshima, J.

Akao, A. See Thomas, K. Akasi, S., constitution of octopine, a nitrogenous substance from the muscle of Octopoda. I. Properties and degradation. II. Synthesis. III. Stereochemistry, A., II, 403.

Akcyjna, L. S., casings for [coal-]mining

explosives, (P.), B., 1138.

Aken, J. N., and Gen. Cable Corp., treatment of metals; [tinning copper wire]. (P.), B., 1226.

Akerlöf, G., and Short, O., solubility of sodium and potassium chlorides in corresponding hydroxide solutions at 25°, A., I, 610.

and Teare, J. W., thermodynamics of concentrated aqueous solutions of hydrochloric acid, A., I, 616.

Teare, J. W., and Turck, H., variation of activity coefficient of hydrochloric acid in hydrochloric acid-sodium chloride solutions of constant total ionic strength from 0° to 50° and solubility of sodium chloride in hydrochloric acid solutions at 25° with methyl alcoholwater mixtures as solvent, A., I, 616.

Akimov, G. V., corrosion of iron in potassium iodide-iodine solution, A., I, 620. and Tomaschov, N. D., theory of electrochemical systems with many electrodes and its application to corrosion prob-lems. I. Potentials of binary systems, A., I, 245.

Akin, R. B., and Bogert, M. T., synthesis of 6:7-methylenedioxy-1:4-dimethylphenanthrene and of certain substi-9:10-dimethyl-1:2:5:6-dibenzanthracenes, A., II, 414.

Stamatoff, G. S., and Bogert, M. T., synthesis of 1:4-dimethylphenanthrene,

A., II, 374.

Akiyama, H. See Tamamnshi, B.

Akiyama, K., quick-setting and heatevolving cements. I. and II., B., 141, 1054. Fused cement. II. Mineral constitution of aluminous cement, B., 784. Special Portland cements. VI. Burning temperature of manganese-chromium Portland cement, B., 784.

Akizuki, H., histozymes, A., III, 354. Akobe, K., d. and l-a-hydroxy-γ-methyl-

thiolbutyric acids; nutritive value of the acids, A., III, 34.

Akobjanov, L. G., artificial latex; aqueous dispersions of rubber, B., 65.

Aktiebolaget Hammarbylampan, between materials having different thermal coefficients of expansion, (P.),

Aktieb. Kemiska Patenter, filtering apparatus, (P.), B., 198. Phosphoric acid, (P.), B., 237. Evaporation of liquids, (P.), B., 634.

Aktieb. Lavator, and Salenius, C. G. T., apparatus for extracting soluble principles from, or washing or dyeing, stuff, (P.), B., 857.

Aktieb. Mo Och Domsjö Wallboard Co.

See Lundbäck, T. A. I.

Aktieb. Separator, separation of oil produced by hydrogenation, (P.), B., 210. Removal of oil from air or other gaseous fluids, (P.), B., 307. Centrifugal separators, (P.), B., 740, 1147.

and Bergedorfer Eisenwerk Akt.-Ges. Astra Werke, driving arrangements in centrifugal separators, (P.), B.,

1289.

Aktieb. Svenska Fläktfabriken, air-conditioning plant, (P.), B., 734.

Aktieb. Termisk Isolation, and Munters, C. G., heat-insulating elements, (P.), B., 858. Heat insulation; [refrigerating cabinet], (P.), B., 858. Heat insulation [for refrigerators], (P.), B., 1291.

See also Munters, C. G.

Aktien-Gesellschaft für Bier- & Weinprodukte, and Steiger, W., improvement of beer or similar liquids or
beverages, (P.), B., 1118.

Akt.-Ges. Brown, Boveri & Co., impact mills, (P.), B., 401. Induction furnaces, (P.), B., 582. Dust separators for furnaces, (P.), B., 1144. Centrifugal separators, (P.), B., 1148.

See also Noack, W. G. Akt.-Ges. der Chemischen Produkten-Fabrieken Pommerensdorf-Milch, and Hebler, F., treatment of phosphates under con-

ditions of incandescence, (P.), B., 1201. Akt.-Ges. Cilander, treatment of linen textiles, (P.), B., 1198.
Akt.-Ges. für Stickstoffdünger, calcium

cyanamide, (P.), B., 779. Electrodes for electric furnaces, (P.), B., 1363. Akt.-Ges. für Teehnische Studien, heat

exchangers for thermal power plants, in which gaseous working medium, preferably air, continuously describes a closed cycle under pressure, (P.), B., 510. Working [regulation] of thermal power plants, (P.), B., 990. Aktieselskabet Dansk Gærings-Industri, improving baking strength of flour, (P.), B., 84. Treatment of materials containing proteolytic enzymes, (P.), B.,

Aktieselskapet Krystal, treatment of granular materials with flowing liquids, (P.), B., 198.

A./S. Norsk Aluminium Co., calcium aluminate suitable for manufacture of sodium aluminate by treatment with soda lye, (P.), B., 135.

Akulov, N., theory of the dependence of ferromagnetic properties of metals on temperature, A., I, 503. and Grabovski, M. A., multiparametric

analysis [of steels], B., 792. Akutsu, N. See Fujii, N.

Alabama Asphaltic Limestone Co. See Conzelman, J. H. Alabouvette, "strength" of wheat, B.,

1397.

Alba, M. G., varieties of cassava for hogfeeding purposes, B., 725.

Albers, E. See Albers, H., and Euler,

H. von. Albers, H., and Albers, E., yeast phos-

phatases, A., III, 33. Schlenk, F., and Euler, H. von, nicotinamide from cozymase, A., III, 69.

and Schneider, A., co-enzyme systems of carboxylase, A., III, 68.

See also Euler, H. von.

Albers, V. M. See Knorr, H. V. Albersheim, W. J. See Konheim, H. S.

Albert, A., and Linnell, W. H., chemotherapeutic studies in the acridine series. II. 2-Amino-, 2:5-, 2:7-, and 2:9-diamino-acridines, A., II, 33-

Albert, C. G., filler clays [for paper], B., 535. Albert, D. W. See Kinnison, A. F.

Albert, G. A., dielectric loss measurements parallel to laminations, B., 582. Albert, H. See Wendel, F. B.

Albert, J., highly porous silica-lime stones, (P.), B., 41.

Albert, M. See Lombard, V.

Albert, W. B., manganese deficiency in

oats at Florence [S. Carolina], B., 1386. Arsenic solubility in soils, B., 1390.

Albert Gesellschaft Chemische Fabriken, K., precipitation of copper from solutions containing copper, (P.), B., 357. Treatment [decomposition] of alloys and other materials containing copper and nickel, (P.), B., 1360.

Albert Products, Ltd., welded artificial composition [resin], (P.), B., 158. Preparation and forming of surface of moulded articles from synthetic resins capable of being hardened, (P.), B., 159. Fibre-containing pressed materials from synthetic resins, (P.), B., 1240.

Alberti, C., variations in taste of [acetyl derivatives of] dulcin, A., II, 188. Transformation of indolyl methyl ketones into indole homologues, A., II, 387.

Alberto, A., control of chemical stability of cellulose nitrates by X-ray diagrams,

Albertoni, G. J., impact machine for rubber testing; determining stress-strain diagram at high speed, B., 265.

Albertson, IV., analysis of spectrum of singly-ionised samarium, A., I, 103. Spectra of Sm II and Gd I, A., I, 486. Spectrum of neutral samarium, Sm I, A., I, 590.

and King, A. S., Zeeman effects in the spectrum of Sm II, A., I, 486.

Albln, C., [portable] apparatus for use in galvanising metallic objects, (P.), B., 1361. Production of a heavy-metal galvanising solution, (P.), B., 1361.

Albinson, J., select methods of chemical

analysis, B., 105.

Albizzati, C. M., determinations of manganese as complementary data for judging grade of extraction of wheat flours, B., 78.

Albrecht, E., tests of mechanical strength

of glass, B., 137.

Albrecht, W. A., nitrate-nitrogen in soil as influenced by the crop and soil treatments, B., 821. Effects of different soil treatments, long continued, on bacterial activity, B., 1383.

Albrecht, W. H., hydrogels. XIV. Mag-netic characterisation of manganous

hydroxide, A. I., 360.

See also Simon, Arthur. Albright, P. S., and Williams, J. W.electrical forces between ions and neutral molecules in aqueous solution; saltingout effect, A., I, 135. Albright, W. P. See Thompson, R. B.

Albright & Wilson, Ltd., bleaching and germicidal compositions and their utilisation, (P.), B., 134. Casein products, (P.), B., 495.

Alco Products, Inc., conversion of hydro-

carbons, (P.), B., 1011.
Banks, D. B., and Barton, P. D. dewaxing of hydrocarbon oils, (P.), B., 209.

Alcock, E. D., effect of an electric field on

viscosity of liquids, A., I, 126.

Alcock, G. P. See Rolle, A. C.

Alcock, J. F., treatment of exhaust gases from compression-ignition types of engines in underground workings, (P.),

Alcock, P., Berry, J. L., and Daly, I. de B., action of drugs on pulmonary circul-

ation, A., III, 476.

Alcock, R. S., determination of boric acid in food-stuffs, B., 1127.

Alcock, W. J., disposal of molasses by

burning for production of a potash fortiliser, B., 1111.

Aldebert, P. See Beltran, E.

Alden, G. R. See Kallender, E. L.

Alder, K., and Rickert, H. F., diene synthesis. II. Thermal decomposition of the addition and the second synthesis. tion of the additive products of acetylenedicarboxylic ester. III. Products obtained from a-terpineol by loss of water, A., II, 341, 345.

and Stein, G., course of diene syntheses,

A., II, 321.

Alderman, A.R., eclogites in the neighbourhood of Glenelg, Invernessshire, A., I, 270.

Aldinger, R., gas opacification in enamels, B., 440. Singlur, a new raw material for enamels, B., 547. Rôle of boric acid in enamel, B., 547. Modern [iron] pickling in enamel work, B., 548. Defects in enamel, B., 548. Formulation of enamels, B., 781. Enamel and its industrial applications, B., 1339. Design of enamels, B., 1339.

Aldous, A. E. See Atkeson, F. W. Aldred, C. N. See Harris, I. Aldridge, B. G., and Shepherd, G. C., jun., nickel steels at low temperatures; impact properties of the 21% steels, B., 562.

See also Union Oil Co. of California. Aldrin, E. E. See Buc, H. E.

Aleev, B. S., secretion of organic substances by algae, A., III, 158.

Popova, N. E., and Bereshnoi, N. D., protein decomposition in salt fish during storage, B., 974.

Alejnikow, I. See Kallauner, O. Aleksandra, (Fraulein) S. See Hrynakow-

Alemian, S. A. See Vagramian, A. T. Aleschin, S. N., peptisation of soils: separation of the organic fraction of the soil-absorbing complex, B., 593. Electrodialysis of soils, B., 594.

Aleschin, S. S., influence of concentration of glucose solution, and of proportion of iodine necessary for oxidation to that actually used, on results given by

Willstätter and Schudel's method, A., II, 7.
Alexa, V., spectral study of ketonic polyenes; extinction curves of dibenzylideneacetone, benzylideneacetone, benzylideneacetophenone, and their parasubstituted derivatives, A., I, 165.

Alexander, A. E., refractive indices of natural resins, B., 808.

and Schulman, J. II., orientation in films of long-chain esters, A., I, 562. Alexander, G. H., air filters, (P.), B., 194.

Alexander, H. See Alexander & Co., H.

Alexander, J. C. See Casey, H. W.

Alexander, L. T., and Shaw, T. M.,

determining ice-water relationships by measurements of dielectric constant changes, B., 954.

Shaw, T. M., and Muckenhirn, R. J., detection of f.p. by dielectric measure-

ments, A., I, 534. Alexander, P. P., and Ventures, Ltd., reduction of ores by metallic calcium, (P.), B., 798.

See also Gen. Electric Co.

Alexander, R. A., neurotropic virus of horse sickness. II. Physical and chemical properties, A., III, 36.

Alexander, W. A. See Steacie, E. W. R. Alexander, W. F., and Kotkis, A. J., physiologically active substance in the body resulting from administration of acetyl-β-methylcholine chloride by iontophoresis, A., III, 64.

Alexander, W. O., and Hanson, D., copperrich nickel-aluminium-copper alloys. I. Effect of heat treatment on hardness and electrical resistivity, B., 922. and Vaughan, N. B., constitution of the nickel-aluminium system, A., I, 454.

Alexander & Co., Ltd., H., and Alexander, H., [rivet-heating] furnaces, (P.), B., 360. Alexander & Posnansky, sulphurising fatty oil, (P.), B., 60.

Alexandrov, A. F., rapid determination of silica in insoluble slags, B., 451.

and Tzibulevski, C. I., analysis of AMS alloy, B., 685.

Alexandrov, A. P., and Solotareva, A. M., collision ionisation in solid dielectrics, A., I, 11. Electrical conductivity of homopolar substances. II., A., I, 11. Thermal dissociation in liquid dielectrics, A., I, 22.

See also Kotscheschkov, K. A.

Alexandrov, G. P., decomposition of zircon by chlorination, A., I, 146.

Byk, G. O., and Hochstein, J. P., preparation of hafnium salts, A., I, 146.

Alexandrov, Z. A., and Raiski, S. M., spectrum analysis of copper, titanium, and aluminium in steels, B., 564. Alexandrova, E. See Chotinski, E. S.

Alexandrova, R. S. See Danilov, S. N.

Alexandrova, Z. P., catalytic preparation of aliphatic aldehydes, B., 522.

Alexandrovitsch, G. S., continuous determination of turbidity and coloration, A., I, 331.

Alexandry, A. K. See London, E. S.

Alexeev, R. I., constructional devices for increasing accuracy of titration with large volumes, A., 1, 332.

Alexeev, V. N. See Alexeevski, E. V.

Alexeeva, A. M., colorimetric determinations.

ation of potassium, A., III, 292.

Alexeeva, E. P. See Bach, A. N.

Alexeeva, M. V., permanganate microtitration, A., I, 329.

Alexeevski, E. V., and Alexeev, V. N.,

active charcoal for sorption of natural gas, B., 514.

and Golbraich, Z. E., analysis of organic compounds containing nitrogen. I. Determination of nitro-compoundnitrogen by the method of alkaline

fusion, A., II, 128.

Moskvin, G. M., and Podossep, L. J., sorption by, and desorption from, activated charcoal of highly diluted

nitrogen oxides, A., I, 25. and Platschenov, T. G., activation of charcoal by zinc chloride. I. Influence of concentration of zinc chloride on activity of charcoal, B., 745.

and Serebrenni, V. K., sorptive activity of U.S.S.R. clays with respect to vapours. I. Determination of optimum conditions of thermal treatment of clays, B., 855.

Alexeevski, N. E. Sce Schubnikov, L. V.

Alexopoulos, K. D., experiments on lithium, boron, and deuterium, A., I, 161.

Alexy, K. See Eisenlohr, F. Alfageme, C. See Fernández, O.

Alfano, F. See Basile, A.
Alferiev, G. P., mud deposits of the Chansche Sea, A., I, 154.

Alfimeeva, E. See Essin, O. Alfimova, E. See Ruibak, B.

Alfthan, H., effect of screening on cleanliness of pulps, B., 125.

Alfthan, J., and Du Pont Viscoloid Co., refining cellulose acetate, (P.), B., 1323. Alfven, \hat{H} ., cosmic cyclotron as cosmic ray generator? A., I, 6. Origin of cosmic radiation, A., I, 340.

Algar, J., and Carey, (Miss) I. P., synthesis of flavonols; oxidation of flavindogenides, A., II, 513.

and Hurley, (Miss) D. E., synthesis of diflavonols, A., II, 112.

Algemeene Kunstzijde Unie Naamlooze Vennootschap, viscose, (P.), B., 127. [Drying] of artificial silk, (P.), B., 229. Winding of spools in the spinning of artificial silks, (P.), B., 1038. Apparatus for production of spun cakes of artificial silk, (P.), B., 1038.

Algera, L., influence of temperature treatment on carbohydrate metabolism, respiration, and morphological development of the tulip. II. and III., A., III,

48, 80.

Ali, A., Desai, R. D., Hunter, R. F., and Muhammad, S. M. M., Friedel-Crafts condensation of substituted glutarie anhydrides with benzene and formation of isomeric benzoylphenylpropionic acids in the reaction between phenylsuccinic anhydride and benzene, A., II, 340. Alicante, M. M., and Rosell, D. Z., index

of texture and classification of Philippine

soils, B., 70.

Alichanian, A. I., production of pairs by γ-rays and internal conversion of γ-rays, A., I, 276. γ-Rays from lithium bombarded with protons, A., I, 389.

Alichanov, A. I., and Dželepov, B. S., artificial radioactivity, A., I, 108. Dependence of the β -spectra of radioactive elements on atomic number, A., I, 388.

Alichanov, A. I., and Kozodaev, M. S., emission of positive electrons from a radioactive substance, A., I, 3.

and Spivak, P. E., positron spectra initiated by y-rays of radium-C, A., I, Positron spectrum of radium-C, A., I, 339.

See also Alichanian, A. I.

Alicino, J. A. See Hamill, W. H.

Alifanova, L. A., and Raiski, S. M., spectrum analysis of steel for chromium and tungsten, B., 352.

Alimarin, I. P., structure of precipitates obtained in chemical analysis. I., A., I, 259. Colorimetric determination of

fluorine in minerals, A., I, 324. and Arest-Jakubovitsch, R. E., content of scattered elements in fluorites of the U.S.S.R., A., I, 52. Formation of tin hydride in reduction of hydrochloric acid solutions of tin, in quan-

titative analysis, A., I, 427. and Fried, B. I., detection of small amounts of niobium and tantalum in minerals, rocks, and metals, A., I, 581.

and Veshenkova, M. S., determination of tin by means of phenylarsinic acid, A., I, 581. Detection of small amounts of tin in ores by means of cacotheline, B., 449.

and Zverev, V. S., modification of colorimetric determination of silicic acid in presence of iron, phosphorus, and

fluorine, A., I, 326.
Alimchandani, R. L. See Shah, N. M. Alkins, W. E. See Bolton & Sons, T.

Alklum Storage Batteries, Ltd., and Berg, C. J., lids or covers of [alkaline] electric accumulators, (P.), B., 1076.

Alksnis, A., lytic principle of urine in urinary B. coli [infection], A., III, 254. Allan, B. W., titanium dioxide, (P.), B., 909.

Allan, H. L., refining of hydrocarbon liquids, (P.), B., 322.

Allan, J. See Brit. Celanese. Allan, W. T., raw coal in blast furnaces, B., 678.

Allard, G., structure of organic molecules determined by spectral methods, A., I, 62. Mean electrical density of a complex atom, A., I, 286.

Allard, J. See Quelet, R. Allardt, H. G. See Schering-Kahlbaum Akt.-Ges.

Allchorne, E. See Bacharach, A. L.

Alleaume, A., carburetting index of petroleum oils, B., 315. Tests for selection of coals [for carbonisation], B., 1293.

Allemann, O. See Du Pont de Nemours

& Co., E. I. Allen, A. J., Steiger, R. E., Magill, M. A., and Franklin, R. G., amino-acids, acylamino-acids, dipeptides, acyl-dipeptides, and derivatives of these compounds. II. Effects of irradiation with cathode rays and ultra-violet light, A., II, 89.

See also Magill, M. A.

Allen, A. W., treatment of gold ores, B., 48.

Allen, B. B. [with Henze, H. R.], ketoethers. II. Alkyl a-a'y'-dichloroisopropoxyethyl ketones, A., II, 177.

Allen, C. C. See Bataafsche Petroleum

Maats., and Shell Development Co. Allen, C. F. H., and Ball, W. L., y-benzoylbutyronitrile [δ-keto-δ-phenyl-γ-valeronitrile], A., II, 248.

Massey, E. E., and Nicholls, R. V. V., action of alkaline reagents on diphenylbenzoylbutyrolactone [δ-keto-aβδ-triphenyl-γ-valerolactone], A., II, 245.

and Overbaugh, S. C., benzanthrone and 4-phenylbenzanthrone, A., II,

and Rudoff, H., 3:4-diphenylchlorocyclopentenones and related compounds, A., II, 457.

See also Garvey, B. S., jun.

Allen, C. H. See Mantell, C. L. Allen, C. W., line contours of the atmos-

pheric oxygen bands, A., I, 385. Central intensities of Fraunhofer lines, A., I, 386.

Allen, E., Diddle, A. W., Burford, T. H., and Gardner, W. U., ovarian hormone threshold for experimental menstruation in monkeys, A., III, 278.

Smith, G. M., and Gardner, W. U., test for ovarian follicular hormone and other estrogens, A., III, 362. See also Leblond, C. P.

Allen, E. T., and Day, A. L., hot springs of the Yellowstone National Park, A., I, 51.

Allen, F. W., and McKinnon, L. R., storage of Yellow Newtown apples in chambers supplied with artificial

atmospheres, B., 182; and Pentzer, W. T., effect of humidity in cold storage of fruits, B., 615.

Allen, Frank W. See Eiler, J. J.
Allen, H. E., meat-curing composition,
(P.), B., 1130.

and McCaleb, A. G., meat-curing composition, (P.), B., 978. Celery salt, (P.), B., 1046. Protein food colour,

(P.), B., 1405.

Allen, H. P., Achotla chloridising mill [for silver ores], B., 796.

Allen, H. R., and Gault, L., use of silica dishes in determination of potash in fertilisers, B., 478.

Allen, J. F., Peierls, R., and Uddin, M. Z., heat conduction in liquid helium,

and Shire, E. S., resistance thermometry below 1.0° abs., A., I, 378.

Allen, J. S., disintegration of beryllium by

protons, A., I, 162. Allen, J. W. See Whitford, A. C.

Allen, L. A., Harrison, J., Watson, S. J., and Ferguson, W. S., chemical and bacteriological changes occurring in grass silage, B., 616.

Watson, S. J., and Ferguson, W. S., effect of addition of various materials and bacterial cultures to grass silage on subsequent bacterial and chemical changes, B., 616.

Allen, N. N. See Cole, C. L. Allen, R. H. See Berrisford Eng. Co.

Allen, T. C., toxicity of kerosene steepates of derris and pyrethrum to some potato insects, B., 712. Allen, W. H., Gale, W. A., Ritchie, C. F.,

and Amer. Potash & Chem. Corp., apparatus for manufacture of sodium carbonate monohydrate, (P.), B., 342.

Allen, W. H., Underhill, E., Ritchie, C. F., and Amer. Potash & Chem. Corp., apparatus for effecting solution or lixiviation, (P.), B., 1148.

Allen, W. M., and Goetsch, C., crystalline progesterone from pig ovaries, A., III,

See also Reynolds, S. R. M. Allen & Co., Ltd., E. See Miller, T. H. Allendörfer, A. Sec Schloemann, E.

Allers, W. D., and Kendall, E. C., maintenance of adrenalectomised dogs without cortin through control of the mineral constituents of the diet, A., III, 400.

Alley, A., inhibitory effect of histamine on

gastric secretion, A., III, 24.

MacKenzie, D. W., jun., and Webster,
D. R., dissociation of the functional properties of the gastric glands under the influence of fat, A., III, 10.

Alley, J. D., and Amer. Brakeblok Corp., composition friction elements, (P.), B.,

Allgemeine Elektricitäts-Ges., dispersion of gas in a liquid, (P.), B., 100. Cathodes for thermionic tubes, (P.), B., 255. Electromagnetic devices for use in weak magnetic fields, (P.), B., 359. Magnetic [nickel-iron alloy], (P.), B., 359. Electrical conductors, (P.), B., 361. Liquid [gas or foam] buths, (P.), B., 858. Apparatus for moistening air, (P.), B., 996.

Allgeo, H. D. See Wanamaker, E.Alliata, G., absolute efficiency tester, a new apparatus for supervising and controlling [the combustible properties of town's j gas, B., 864.
Allinger, H. W. See Bisson, C. S.

Allington, W. B., sclerotial formation in Rhizoctonia solani as affected by nutritional and other factors, A., III, 356.

Allinne, M. See Lecoq, R.

Allinson, J. J., electric dehydration and

de-salting of crude oil, B., 1004. Alliott, E. A., art of filtration, B., 1142.

See also Manlove, Alliott & Co. Allison, A., chilled iron rolls: chemical and

physical properties, B., 350.

Allison, D. K., colour photography, (P.), B., 501.

and Detracolor, Ltd., light-sensitive layer and production of coloured pictures, (P.), B., 293. Treatment of photographic films [to produce coloured images], (P.), B., 732.

See also Dieterich, L. M. Allison, F. E. See Ludwig, C. A. Allison, L. E. Sec De Turk, E. E. Allmänna Svenska Elektriska Aktiebolaget,

electric condensers, (P.), B., 1076.
Allman, S. L. See Griffiths, E.

Allman-Ward, F. H. See Mond Nickel Co.

Allmand, A. J. See Burrage, L. J., and Nickels, L.

Allner, W., brown coals as raw material for town's gas and "synthesis" gas, B., 201. Allott, G. W., and Newton, Chambers & Co., combined heater and hydraulic valve

for gas-purification plant, (P.), B., 1167. Alloy Research Corporation, iron or steel alloy, (P.), B., 147.

Alloys Co., zinc dust, (P.), B., 1227. Allport, N. L., [properties of] p-aminobenzene- [aniline-p-] sulphonamide, B.,

Allsopp, A., seasonal changes in the organic acids of rhubarb (Rheum

hybridum), A., III, 443.

Allsopp, C. B., absorption spectra of tri-

iodides, A., I, 279.
Allsworth, T. W., and Amer. Rolling Mill Co., pack-rolling of ferrous metals, (P.), B., 580.

Alm, F. See Runnström, J. Almasy, F., spectrographic isolation of carcinogenic substances, A., III, 418.

Almen, J. O., lubricants and false brinelling of ball and roller bearings, B., 1219. See also Gen. Motors Corp.

Almendinger, V., malting naked barleys for distilleries, B., 485. Naked barley. IV. and V., B., 721.

Almquist, F. O. A., water-chlorination experience, B., 985.

Almquist, H: J, antihæmorrhagic vitamin, A., III, 156, 497. Crystals with vitamin-K potency, A., III, 365. Sources and nature of the chick

gizzard factor, A., III, 498. and Stokstad, E. L. R., incidence of dietary hæmorrhagic disease in chicks, A., III, 234. Assay procedure for vitamin-K (antihænorrhagic vitamin), A., III, 498. Gizzard factor of the chick, A., III, 498.

Almy, G. M., spectra of diatomic molecules of elements of the fifth group, A., 1, 164. and Horsfall, R. B., jun., spectra of neutral and ionised boron hydride, A., I, 216.

See also Challacombe, C. N., and Kinzer,

Alox Corporation. See Bnrwell, A. W. Alphen, A. J. S. van. See Verkade, P. E. Alphen, J. van, history of classical conception of valency, A., I, 14. New synthetic methods in organic chemistry, A., II, 173. Aliphatic polyamines. IV.—VI., A., II, 232, 302, 520.
Alquier, J., and Michaux, A., calcium

A., calciumphosphorus ratio in different tissues, particularly in the femur of the rabbit during growth, A., III, 423.

and Sirot, M., comparative determination of nitrogen by the "Dumas" and Kjeldahl methods, A., III, 368.

Alsherg, C. L., distribution of phosphorus in the starch granule, A., III, 330. Alsop, W. G. See Kharasch, M. S.

Alsted, G., pernicious anamia after nitrie acid corrosion of the stomach, A., III, 89. Alt, A., and Monsanto Chem. Co., foodflavouring composition, (P.), B., 285. Alt, C. A. See Du Pont de Nemours & Co.,

E. I.

Altar, W., liquid state, A., I, 452.

and Eyring, H., absolute rates of fouratom reactions, A., I, 33. See also Condon, E. U.

Althurger, L., simple firedamp-testing apparatus, B., 106. Apparatus for determining carbon dioxide in stone dust, B., 133.

Alten, F., and Knippenberg, E., deter-mination of nitrites in green plants and

plant extracts, A., III, 160. and Loofman, H., determination of assimilable nutrients [in soil] by Neubauer's method in comparison with the methods of the Deutsches Kalisyndikat Berlin-Lichterfelde, B.,

Wandrowsky, B., and Hille, E., determination of nitrate contents of plant substances as nitroxylenol, A., III, 81.

Wandrowsky, B., and Knippenberg, E., determination of ammonia in green plants, A., III, 81.

Altenkirch, E., thermodynamic methods

of air conditioning, B., 1413.

Alter, C. M., and Yuill, L. A., lead-uranium-thorium ratio of a single crystal of Wilberforce uraninite, A., 1, 205.

Altermann, W. See Klemt, G.

Alterthum, H., Lompe, A., and Seeliger, R.,
"clean-up" of inert gases in the electric
discharge. I., A., I, 53.
Althausen, D. See Willkie, H. F.
Althausen, T. L., and Wever, G. K.,

effect of saccharin and galactose on blood-

sugar, A., III, 165.
Alther, J. G. See Universal Oil Products Co. Altick, C. D., pulp preparation, (P.), B.,

430. Altmannsberger, K., electrolytic coatings on aluminium and its alloys, B., 453. Electrodeposited coatings on zinc diecastings, B., 923. Rapid titrimetric determination of manganese in alumin-

ium and aluminium alloys, B., 1066. Altpeter, H., corrosion fatigue in wire ropes, B., 143.

Altpeter, \hat{R} . J., and Kowalke, O. L., combustion of carburetted water-gas in luminous flames, B., 105.

Altshuler, J. A., Graves, F. G., and Brown, E. S., "Stratcold" treating process [for refining gasoline], B., 869. See also Nutt, D. B.

Altshuler, S. A., magnetic spin interaction between two particles, A., I, 6. Altshuler, S. S. See Werch, S. C.

Alty, T., condensation coefficients of various substances, A., I, 231. Interaction of vapour molecules with a crystal surface, A., I, 558.

Aluminium Industrie Akt.-Ges., aluminium alloys, (P.), B., 359.

and Hurter, H., electrolytic refining of

aluminium, (P.), B., 1361.
Aluminium, Ltd., Keller, F., and Craighead, C. M., aluminium-base alloys, (P.), B., 934.

and Paine, R. E., casting aluminium-magnesium alloys, (P.), B., 253.

and Somers, F. P., heat treatment of cast aluminium-magnesium alloys, (P.), B., 458.

and Templin, R. L., metal working [e.g., extrusion of aluminium alloys], (P.), B., 148.

Aluminium Plant & Vessel Co., Ltd. See Crosby, W. E., Norman, P. W., Ralph, S. J., and Ullmann, H.

Aluminum Co. of America, and Bohn, D. I.,

resistance-welding, (P.), B., 54. and Brown, Ralph W., [protective] treat-ment of fabrics, (P.), B., 1198. and Dean, W. A., free cutting [aluminium] alloys, (P.), B., 252.

Derr, R. B., and Callis, C. C., solder for

aluminium, (P.), B., 934. and Fink, W. L., free cutting [alumin-

ium] alloys, (P.), B., 252. and Frary, F. C., alumina production [from alum], (P.), B., 779.

and Hopkins, H. L., free cutting [aluminium] alloys, (P.), B., 252. and Janeura, C. G., free cutting [alumin-

ium] alloys, (P.), B., 252. and Keller, F., aluminium welding rod,

(P.), B., 801. and Kempf, L. W., free cutting [alumin-

ium] alloys, (P.), B., 252. Kempi, L. W., and Dean, W. A., free cutting [aluminium] alloys, (P.), B., Aluminum Co. of America, Mason, R. B., and Tosterud, M., production of bright surfaces on aluminium, (P.), B., 934.

and Moore, G. L., treatment of [alumin-

ium] pistons, (P.), B., 934. and Tosterud, M., stabilising [alumin-ium] reflectors, (P.), B., 1072.

Alvarez, L. W., nuclear K electron capture, A., I, 487.

Alvarez-Tostado, C. See McBain, J. W. Alvarino, J., and Bonazzi, A., solubilisation of phosphates in organic fertilisers. II., B., 1384.

Alves, C. A. See Munro, L. A. Alves, M., effect of hypercoagulating substances on blood-calcium, A., III, 4.

Alving, A. S., and Gordon, W., urea, creatinine, and ammonia exerction in dogs in acidosis, A., III, 421.

Alwall, N., and Scheff-Pfeifer, I., mutual action of dinitrophenol-thyroxine and methylene blue-thyroxine in the isolated perfused dog's leg, A., III, 279.

Amagasa, M., and Nishizawa, K., cause of molasses formation. VII. Measurement with a refractometer of effect of salts on rate of crystallisation of sucrose, B., 276.

Amaldi, E., production of artificial radioactivity by means of neutrons, A., I,

and Fermi, E., absorption and diffusion of slow neutrons, A., I, 58. Absorption of slow neutrons, A., I, 161.

Haistad, L. R., and Tuve, M. A., neutron yields from artificial sources, A., I, 438.

See also Fermi, E.

Amat, M. See Duclaux, J. Amati, A., and Sgarzi, L., action of

alkaloids on alcoholic fermentation of molasses, B., 177.

Ambard, L., and Trautmann, S., existence of different invertases, A., III, 313.

Ambarzumian, R. S. See Gindin, L. G.Amberg, C. R., Prior, H. D., and Richmond, J. C., adhesion of enamel to steel produced by the electrodeposition of Mo(OH)₃ on the steel, B., 548.

See also Cole, S. S.

Amberson, W. R. See Bosworth, M. W. Ambler, J. A., impurities in white sugars. IX. Loss of anions from certain salts during evaporation of concentrated sugar

Ambler, J. V. See Sollmann, T.

Ambrojii, M. N., corrosion of Volsk Portland cement, B., 141.

See also Schachkeldian, A. B.

Ambrose, A. M., and Haag, H. B., comparative toxicity and elimination of some constituents of derris, A., III, 218.

See also Haag, H. B. Ambrose, H. A., and Gaspari, H. J. R., oil treatment [of coal] lessens spontaneous heating dangers while serving as dedusting agent, B., 1151.

Teplitz, A. J., and Gulf Res. & Development Corp., treatment of oil wells, (P.), B., 15.

See also Loomis, A. G.

Amco, Inc. See Geer, P. L., and Morton, W, A,

Amdur, E. See Heisig, G. B.

Amelin, A. G., sulphuric acid clouds in the

contact process, B., 32.

Amelina, K. S., influence of gelatin on stability of silver bromide sols, A., I, 304. Amend, W. J. See Du Pont de Nemours & Co., E. I.

Amer, A. A. See Shafik, M.

American Agricultural Chemical Co. See Klosky, S

Amer. Air Filter Co., Inc. See Birkholz, H. E., and Sylvan, S. G.

Amer. Anode Co., Inc. See Hansen, M. E.

Amer. Association of Textile Chemists & Colourists. Sec Nat. Assoc. of Finishers of Textile Fabrics.

Amer. Ball-Mill Co., end liners for grinding mills, (P.), B., 510. Discharge for grind-

ing mills, (P.), B., 631.

Amer. Bemberg Corporation. See Hardt, G., Hartmann, August, Holmann, H., Kumichel, W., Ostermann, W., and Sellner, E.

Amer. Bitumuls Co. See Watts, V. E.

Amer. Brakeblok Corporation, composition friction elements and [asbestos-covered wire] backings therefor, (P.), B., 309. Friction elements, (P.), B., 1291.

See also Alley, J. D., Lidkea, H. J., and Spokes, R. E.

Amer. Brass Co., articles fabricated from coppert or copper-base alloys to be submitted to steam or hot water, (P.), B., 250. Copper-base alloys, (P.), B., 691.

See also Butterbaugh, H. W., Davis, C. H., Jennison, H. C., Munson, E. L., Silliman, H. F., and Smith, C. S.

Amer. Can Co. See Benjamin, H. A., and Shirley, S. C.

Amer. Centrifugal Corporation, continuous automatic centrifugal separating machines, (P.), B., 4. Centrifugal separating machines, (P.), B., 304.

Amer. Chemical Paint Co. See Mackenzie,

Amer. Colloid Corporation. See Amthor, F. Amer. Colloid Sales Division, Inc. See Bechtner. P.

Amer. Cyanamid Co., Christmann, L. J., and Jayne, D. W., jun., [collector for] froth flotation of [lead] ores, (P.), B.,

See also Christmann, L. J., Clark, C. B., Cox, G. E., Rosenstein, L., and Watson, P. B.

Amer. Cyanamid & Chemical Corporation. See Clark, C. B., Harding, W. H., Jaeger, A. O., and Reynolds, B. M.

Amer. Dairy Science Association, Butter Analysis Committee, chemical analyses of butter for moisture, salt, curd, and fat, B., 972.

Amer. Engineering Co., tuyère blocks for [underfeed stoker] furnaces, (P.), B., 309.

Amer, Enka Corporation. Sec Bouhuys, A. G., Hubbeling, J. D. W., Moritz, A. J. L., and Schrenk, H. A.

Amer. Foundrymen's Association, A.F.A. [American Foundrymen's Association] grain-distribution numbers for foundry sand, B., 794.

Amer. Gypsum Co. See Finefrock, T. P. Amer. Hyalsol Corporation. See Bertsch, H., and Butz, K.

Amer. Lecithin Co. See Rewald, B.

Amer. Lurgi Corporation. See Debuch, C. P., Gensecke, W., Pontzen, H., and Wendeborn, H.

Amer. Machine & Foundry Co., mixing devices or beaters, (P.), B., 632.

Amer. Magnesium Metals Corporation. See Hansgirg, F., and Schichtel, G. Amer. Medical Association, cyclopropane for anaesthesia, A., III, 477.

Amer. Oil Chemist's Society, Seed Analysis Committee report, B., 938. Report of the Moisture Committee, B., 1080. Report of Refining Committee, B., 1080. [Rice-bran oil], B., 1081. Report of Soya-bean Analysis Committee, B., 1126.

Amer. Optical Co. See Moulton, H. R. Amer. Platinum Works, pen points, (P.), B., 933.

See also Streicher, J. S.

Amer. Potash & Chemical Corporation. See Allen, W.H.

Amer. Public Health Association, bulking of sludge in activated-sludge process of sewage treatment, B., 847. Report of Sub-Committee on physical procedures in air analysis; instruments and methods for recording thermal factors affecting human comfort, B., 984. Report of Sub-Committee on bacteriological procedures in air analysis; bacteriological method of sanitary air analysis, B., 985. Report of Sub-Committee on chemical methods in air analysis, B., 985.

Amer. Reenforced Paper Co., composite reinforced paper [for box corner stay strips], (P.), B., 231.

Amer. Rolling Mill Co. See Allsworth, T. W., Canfield, J. J., and Payne, W. H. Amer. Securit Co., tempering of glass, (P.),

and Black, L. V., apparatus for use in tempering glass, (P.), B., 914. and Galey, H. J., apparatus for temper-

ing glass plates and sheets, (P.), B., 672. and Goodwillie, D. H., [frame] apparatus for tempering glass sheets, (P.), B., 347.

Amer. Smelting & Refining Co., antimony oxide [from antimonial lead], (P.), B., 135. Antimony trioxide, (P.), B., 239. Refining of lead, (P.), B., 1071. Casting metal [copper, aluminium, and their alloys], (P.), B., 1225.

See also Betterton, J. O., Fleming, E. P., Jones, T. D., Lindner, K. A., Phillips, A. J., Swartz, C. E., Teats, R., and

Thomas, M.D.Amer. Soya Products Corporation. See Bonotto, M.

Amer. Steel & Wire Co. of New Jersey. See Fessler, C. H. H., and Williams, T. D.

Amer. Well Works. See Sperry, J. B. Amer. Zinc, Lead & Smelting Co., titanium dioxide, (P.), B., 343. Metallic sulphates, and ammonium sulphite and sulphur or ammonium thiosulphate, (P.). B., 437. Removal of foreign substances from titanium dioxide, (P.), B., 1202. Treatment of titanium-bearing ores, (P.), B., 1227.

See also Depew, H. A., and Monk, R. H. Ameringen-Haebler, Inc., van Theimer, E. T.

Amerio, A., influence of low temperature on photo-electric cells, A., I, 152.

Amick, M. G. See Du Pont de Nemours &

Amiel, J., slow combustion of benzene, A., I, 141.

Amies, C. R. See Pollard, A.

Amigo, A., injection moulding of plastics, B., 698.

Amis, E. S., and Gabbard, J. L., comparison of hydrogen, quinhydrone, and glass electrodes in magnesium sulphate solutions, A., I, 244.

Amitin, B. Z., and Hirschberg, E. V., reaction between esters and acid chlorides, A., II, 46.

Amitin, B. Z., and Litkevitsch, S. A., limits and velocity of formation of pyromucanilide, A., II, 403. Zagorianskaja, N. V., and Pogorelskaja,

N. A., formation of anilides of acids. A., I, 522.

Ammann, A. See Treadwell, W. D.

Ammann, P., obtaining alimentary substances from earthnuts and other edible oleaginous grains or seeds, (P.), B., 495.

Ammann-Brass, H., reaction of dichromate with formate in light, A., I, 255. Chemistry of inorganic [photographic] de-

velopers, B., 1137.

Ammon, R., isolation of vitamin-C from human placenta, A., III, 44. and Hinsberg, K., determination of vitamin-C in urine, A., III, 170.

See also Hinsberg, K.

Ammonia Casale Société Anonyme, operation of internal-combustion engines and production and supply of fuel thereto, (P.), B., 322. Polymerisation products from acetylene, (P.), B., 1310.

Amornso, V. See Musajo, L. Amoureux, G. See Berthelot, A.

Ams Chemical Engineering Corporation, M. See Brenzinger, J.

Amsler, C., changed activity of morphine in rickets, A., III, 350.

Amsterdamski, J. A., Gagentorn, V. O., and Graschtschenko, B. F., antimony in copper and brass, B., 48.

Amthor, F., Reinhard, G. C., and Amer. Colloid Corp., metal-cleansing composition [for the water-circulating system of internal-combustion engines], (P.), B., 690.

Amundsen, L. H., preparation of diacetylethylenediamine, A., II, 232. Benzenesulphonyl derivatives of o-nitroaniline and o-phenylenediamine, A., II, 409.

Amy, L. See Sannié, C.

Anacker, use of high acid concentrations in dyeing wool with Palatine fast dyes, B., 660.

Anaconda Copper Mining Co. See Doran, H. M., Harrison, C. A., and Yates,

Anaconda Lead Products Co. See Johnson,

Anand, B., Raman effect in dibasic acids in crystalline state, A., I, 63. See also Puri, A. N.

Ananiades, B., and Matthaiaki, E., effect of saponin on vitality of the tubercle bacillus and on evolution of experimental tuberculosis in the guinea-pig, A., III, 318.

Anantarayanan, N. See Ran, M. A. G. Ananthakrishnan, R., constitution of phosphorous acid and the phosphites, A., I, 10. Raman spectra of crystalline powders. I. Halides and sulphate of ammonium. II. Chlorides and sulphates of hydroxylamine and hydrazine. III. Exchange reactions: NH₄Cl and D₂O. IV. Some organic and inorganic compounds. V. I. Inorganic nitrates. II. Water of crystallisation, A., I, 167, 220, 282, 443. Raman spectra of some simple molecules, A., I, 283.

Anbroch, Z. A. See Korenman, I. M. Andam, A. V. See Calma, V. C.

Anderegg, F. O., gradings for high density, B., 299.

Andersag, H., and Westphal, K., synthesis of the antineuritic vitamin, A., II, 525.

Andersch, M., and Oberst, F. W., filterable calcium in late-pregnant and parturient women and in the new-born, A., III, 379.

Andersen, K. K., determination of camphor, menthol, and methyl salicylate in mixtures, B., 1168.

Andersen, O., immunity and the virus-neutralising antibody; passive im-munity against vaccine virus, A., III, 293. Demonstration of vaccinia virus in the organs of vaccinated rabbits, A., III, 415.

Anderson, A. A. See Wood, H. G. Anderson, A. B. See Niemann, C. Anderson, A. E., multiple nickel-plating on zinc, B., 52.

Anderson, A. P., and Talley, S. K., [petroleum] wax precipitation from propane solution, B., 867.

See also Fuchs, G. H. von. Anderson, A. R., and Briggs, L. H., the alkaloid of Solanum auriculatum, Ait., A., II, 326.

Anderson, A. W., Harrison, R. W., and Pottinger, S. R., drying cod and haddock waste, B., 726.
See also Harrison, R. W., and Pottinger,

S. R.

Anderson, B. W., and Payne, C. J., magnesium-zinc-spinels from Ceylon, A., I, 585.

Anderson, C. D., Millikan, R. A., and Neddermeyer, S. H., high-altitude measurements on the energies of

cosmic-ray tracks, A., I, 491. and Neddermeyer, S. H., heavy particles produced by cosmic-ray encounters, A., I, 545.

See also Neddermeyer, S. H.

Anderson, C. N., and Lever Bros. Co., aromatic mercury alcoholates of hydroxyfatty compounds, (P.), B., 1272. Arylmercury polynuclear-carboxylates, (P.), B., 1272. Arylmercury aromatic B., 1272. Arylmercury aromatic carboxylates, (P.), B., 1408. Arylmercury salts of oxyacids of chromium, (P.), B., 1409.

Anderson, C. O. See Davis, S. H.

Anderson, C. T., heat capacities of chromium, chromic oxide, chromous chloride, and chromic chloride at low temperatures, A., I, 230. Heat capacities of molybdenite and pyrites at low temperatures. A., I, 230. Heat capacities of sclenium crystals, selenium glass, and tellurium at low temperatures, A., I, 404.

Anderson, D., opossum (Trichosurus vulpecula). I. Blood analyses and lipin glandular constituents in normal and lactating opossums. II. Effects of splenectomy, adrenalectomy, and injections of cortical hormone, A., III, 194. Anderson, D. Q. See Zobell, C. E.

Anderson, E., and Haymaker, W., elaboration of hormones by pituitary cells growing in vitro, A., III, 73.

Anderson, E.A., zinc in chemical industries, B., 144.

See also Kroll, L.

Anderson, E. B., Herschdörfer, Z., and Neave, F. K., enzymes of milk. I. Kay and Graham's phosphatase test, B., 489.

and MacWalter, R. J., enzymes of milk. II. Determination of catalase, B., 1122. and Meanwell, L. J., low-temperature pasteurisation [of milk]. II. Heatresistance of a thermoduric streptococcus grown at different temperatures, B., 79.

Anderson, E. G. E. See Stuart, C. A. Anderson, E. O., Dowd, L. R., and Stuewer, C. A., relation of acidity of milk to oxidised flavour, B., 970.

White, G. C., and Johnson, R. E., maize-gluten feeding and titratable acidity of milk, B., 1121.

Anderson, F. W., Bacharach, A. L., and Smith, E. L., properties of calciferol, A., III, 327.

Anderson, G., durability characteristics of types of zinc oxide [in paint], B., 156. Properties of zinc oxide as a paint pigment, B., 156.

Anderson, G. A., development and application of aluminium and its alloys, B., 926. Anderson, G. C., and Dickson, W. M., sisal fibres for manufacture into yarns or similar articles, (P.), B., 228.

Anderson, G. K., and Neville Co., polymerisation of [coumarone-indene] resins, (P.), B., 1374.

Neville Co., and Carmody, W. H., polymerisation of [coumarone-indene]

resins, (P.), B., 1374.

Anderson, G. W., and Hosken, J. C. production, disposal, and utilisation of coke-oven gas, B., 1294.

Anderson, H. C., and Chrysler Corp., direct bonding of rubber and metal, (P.), B., 474. Anderson, H. G., and Raytheon Production Corp., vacuum tube, (P.), B., 694.

Anderson, H. H. See Schnmb, W. C Anderson, H. P., and Hart, M. C., derivatives of o-hydroxyphenylmereury chloride, A., II, 356.

Anderson, H. R., why newly shellacked floors sometimes turn dark, B., 590.

Anderson, H. V., and Kehl, G. L., X-ray study of preferred orientation in rolled copper, B., 568. Anderson, H. W., effect of total voltage on

breakdown in vacuum, B., 459.

Kadow, K. J., and Hopperstead, S. L., evaluation of some [forms of] cuprous oxide recommended as seed-treatment products for control of damping-off, B., 958.

Sce also Kadow, K. J.
Anderson, Harold W. See Du Pont de
Nemours & Co., E. I.

Anderson, I., effect of adrenaline on bloodsugar and -lactic acid in Addison's disease and in adrenalectomised dogs, A., III, 58. Anderson, I.A. See Buell, M.V.

Anderson, J., reproduction in cattle. II. Influence of environmental factors, A., III, 208.

Anderson, John A. See Stoesser, A. V.

Anderson, John Ansel, and Meredith,
W. O. S., laboratory malting. II. Precision, B., 1115.

and Sallans, H. R., determination of diastatic power of malt in degrees Lintner by means of a ferricyanide reagent, B., 485.

See also Sallans, H. R.

Anderson, John Arthur. See Standard Oil Co.

Anderson, J. J., and Bnrrows, G. J., compounds formed by mercury salts with tertiary arsines, A., II, 220.

Anderson, J. M., preparation of pollen extracts, A., III, 122.

Anderson, J. S., action of nitric oxide on nickel carbonyl, A., I, 95. Metallic state and intermetallic compounds, A., I, 454. Interstitial and "Bertholide" compounds, A., I, 526. Structure of organic molecular compounds, A., I, 604.

Anderson, J. S., Purcell, R. H., Pearson, T. G., King, Alexander, James, F. W., Emeléus, H. J., and Briscoe, H. V. A., microflotation method for precise comparison of liquid densities and its application to a preliminary investigation of distribution of heavy water in certain salt hydrates and to other matters, A., I, 583.

Spoor, N. L., and Briscoe, H. V. A., possible acid-dissociation of metalammonia ions and its bearing on certain reactions, A., I, 248.

See also Brockway, L. O., James, F. W., and Penney, W. G.

Anderson, L. See Lowen, L. Anderson, L. D., and Potash Co. of America, concentration of [sylvine] ores [by

flotation], (P.), B., 1201.

Anderson, M. S., and Byers, H. G., neutralisation curves of colloids of soils representative of the great soil groups,

B., 376. and Noble, W. M., comparison of chemical quick tests on different soils, B., 1099.

Anderson, N. G., Lofquist, A. F. T., and Norton Co., grinding wheel and treatment therefor, (P.), B., 551.

Anderson, O. E., causes for non-uniformity

in sulphite pulp manufacture, B., 425.

Anderson, O. S., Anderson, R. T., and
Anderson Co., V. D., dryer, (P.), B.,
1145. Apparatus for drying or cooling

materials, (P.), B., 1145.

Anderson, P., structural properties of vibrated concrete, B., 1344

Anderson, R. C. See Chen, K. K.

Anderson, Raymond J. See Cloke, J. B. Anderson, Rudolph J. See Cason, J., and Reeves, R. E.

Anderson, R. S., attempted use of crystals as calcium electrodes. J. and II., A.,

Anderson, R. T., improving soya-bean oil colour, B., 940.

See also Anderson, O. S.

Anderson, T. F., Lassettre, E. N., and Yost, D. M., Raman spectra of boron trifluoride, trichloride, and tribromide; effect of boron isotopes, A., I, 10.

Anderson, W. E. See Williams, H. H. Anderson, W. H. See Cory, E. N. Anderson, W. T. See Hanovia Chem. &

Mannig. Co.

Anderson Co., V. D. See Anderson, O. S. Anderssen, F. G., citrus manuring: effect on cropping and on composition and keeping quality of oranges, B., 1102.

Andersson, A., purification of cream, (P.), B., 84.

See also Edin, H.

Andervont, H. B., pulmonary tumours in mice. I. Susceptibility of lungs of albino mice to the carcinogenic action of 1:2:5:6dibenzanthracene, A., III, 460.

Andes, J. E., and Myers, V. C., colorimetric determination of guanidine-like substances in urine, A., III, 170.

Ando, M. See Kishi, N. Ando, S., hydrogenation of low-temperature tar by laboratory-scale continuous plants. I. and II., B., 203, 748. Catalytic hydrogenation of phenolic oil in low-temperature tar. IV. Effect of catalysts on composition of hydrocarbons formed, B., 748. High-pressure hydrogenation of various tars. I. Comparison of low-temperature tar oil, phenolic oil, and creosote oil, B., 865.

Ando, T., reaction between ethyl ketomalonate and aromatic hydrocarbons. I. Condensations in the presence of stannic chloride, A., II, 17.

See also Urushibara, Y.

Andrade, E. N. da C., and Roscoe, R., glide in metal single crystals, A., I, 228.

and Tsien, L. C., surface cracks in glasses, B., 910.

André, E., sulphur compounds and optically active hydrocarbons present in a mineral lubricating oil derived from Venezuelan crude oil, B., 408.

and Maurel, A., transformation of chlorinated hydrocarbons obtained from vaseline oil into acetylated hydrocarbons, B., 324. Lubricant hydrocarbons of petroleum. II. Action of chlorine and bromine on a medicinal vaseline. III. Conversion of chlorinated hydrocarbons obtained from vaseline oil into acetylated hydrocarbons. IV. Selective extraction of the acetates

in acetylated vaseline, B., 753, 866.

Andre, F. See Tate, H. D.

Andreadis, T., Toole, E., and Binopoulos,
X., determination of sugar in raw tobacco, B., 1406.

Andreae, M. See Bernhard, K.

Andreas, C. H., growth-substance and growth of acrial roots of Vitis gongyloides, Ā., III, 242.

Andreasen, A. H. M. [with Wesenberg, B., and Jespersen, E. G.], comminution, B.,

Andreatta, C., texture analysis of metamorphic rocks; orientation rule for

cyanite, A., I, 270.

Andreev, D. N. See Petrov, A. D.

Andreev, E. A., two-stage process of thermal ignition of an [equimolecular] mixture of butane and oxygen, A., I, 247.

Andreev, N. N., and Kibirkschtis, S. G.,

aërosols. I., A., I, 78.

Andreev, S., and Balkaschin, B., application of high-frequency currents to

flour-mite control, B., 178. Andreeva, A. I., and Kuzin, S. A., flotation of boric acid and borates from Inder

boracites, B., 905. See also Schvedov, D. A.

Andreeva, E. A., comparator for p_H determination, A., I, 266.

See also Kuzminich, I. N.

Andreeva, E. F. See Magidova, S. S. Andreeva, O. I., and Vassiliev, B. B., comparison of action of oxidising agents liberating iodine, A., I, 622.

Andreeva, P. See Sudarev, P.

Andreeva, V. V. See Klinov, I. J.

Andreevski, D., approximate evaluation of the free energy of phenol and crosol, A., I, 557.

Andréu Urra, J., and Lozano, J., basal metabolism and specific dynamic action of proteins in liver disease, A., III, 14. Andrew, G., hyperalkaline rocks of Egypt,

A., I, 432.

Andrew, J. H., Percival, R. T., and Bottomley, G. T. C., second report of the Steel Castings Research Committee. III. Fluidity of iron-carbon and other iron alloys, B. 45.

Andrewes, C. H., Ahlström, C. G., Foulds, L., and Gye, W. E., reaction of tarred rabbits to the infectious fibroma virus (Shope), A., III, 460. See also Laidlaw, P. P.

Andrews, C. A. See Kirschbaum, E. Andrews, C. W., Petersen, R. S., and Brassert-Tidewater Development Corp., coking of liquid hydrocarbons, (P.), B., 323. Treatment of petroleum residues, (P.), B., 1160.

See also Petersen, R. S. Andrews, D. H. See Lord, R. C., jun.

Andrews, E. See Aronsohn, H. G. Andrews, F. H., and Jamison, E. A., industrial propane for flame-cutting and general foundry use, B., 575.

Andrews, F. S., physiological factors associated with fruiting habits of the bush

lima bean, B., 599.

Andrews, \vec{F} . \hat{W} ., black-arm disease of cotton under field conditions. I. Relation of incidence and spread of disease to cultural conditions and rainfall in the Anglo-Egyptian Sudan, B., 602.

Andrews, \hat{H}_{\cdot} , lime-burning in a rotary kiln; composition of waste gases, B., 1042.

Andrews, I. H., tests concerning strikeand show-through of newsprint, B., 535. Andrews, J. A. See Internat. Latex Processes.

Andrews, J. C., and Andrews, K. C., inhibitors of colour development in Sullivan method for cystine, A., III, 288.

and Randall, A., sulphur metabolism in cystinuria, A., III, 128.

See also Rutenber, C. B.

Andrews, J. S. See Corwin, A. H. Andrews, K. C. See Andrews, J. C. Andrews, L., gold extraction on the Rand,

B., 924. Andrews & Goodrich, Inc. See Hansen.

E. H.Andrianov, P. I., heat capacity of bound water and of soil, A., I, 138. Dilatograph with photo-recorder [for soils], B., 70.

Andrieux, J. L., and Soc. d'Electro-Chim. d'Electrométall. & des Aciéries Electr. d'Ugine, manufacture of alloys containing boron [by continuous electrolysis], (P.), B., 359.

See also Soc. d'Electro-Chim. d'Electrométall. & des Aciéries Electr. d'Ugine.

Andrijtschuk, M. V. See Goldfarb, J. L. Andronov, P., purification of contact glycerol waters with barium carbonate

and iron shavings, B., 1233.

Andrus, W. de W. See Hellman, L. M.

Angelescu, E. See Zaharia, A.

Angeletti, A. [with Migliardi, C.], reaction between toluquinone and cinnamaldehyde under the influence of light, A., II, 196. Angelico, F., and Cusmano, S., transformation of oximinoacetophenone, A.,

II, 198. Angelini, (Signa.) M. See Hemmeler, A.

Angell, C. H. See Universal Oil Products

Angell, H. R. See Hill, A. V.

Angell, S., and Norris, F. W., hemicellu-loses. V. Of maize cobs. VI. Of the hop (Humulus lupulus) flower, A., III, 51.

Norris, F. W., and Resch, C. E., analysis of carbohydrates of cell walls of plants. II. Determination of pentoses as single substances and in mixtures containing uronic acids and hexoses, A., III, 51.

Angenitzkaja, R., and Romankevitsch, I., increasing plasticity of kaolins and clays, Angenot, P. See Dautrehande, L. Anger, V. See Feigl, F.

Angerer, C. A., effect of salts of heavy metals on protoplasm. I. Action of cupric chloride on the viscosity of sea urchin eggs, A., III, 475. Angermueller, H. P. See Gen. Aniline

Works.

Angle, J. E., and McGarrity, W. F., metallurgical aspects of hot- and cold-[rolled steel] for deep-drawing requirements, B., 1351.

Anglo-Iranian Oil Co., Ltd., and Dunstan, A. E., polymerisation of gaseous olefines [motor fuel], (P.), B., 322. Hydrogenation of unsaturated compounds, (P.), B., 1169.

Anglo Pencil Co., Ltd., and Smith, M., treatment of wood [for pencils], (P.), B., 443. Angus, L. A., and Semet-Solvay Eng. Corp., carburetted water-gas process, (P.), B.,

Angus, T. C., and Stewart, D., dust hazards and their control in a ceramio industry, B., 297. Angyal, S. See Zemplén, G.

Aniela, F., re-emission in band fluorescence

of mercury vapour, A., I, 386.

Anischenko, M., hay from Jerusalem artichoke as fodder, B., 389.

Anissimov, S. B., and Polozov, V. F., destructive hydrogenation of tetrahydronaphthalene, A., II, 183.

Anker, H. E. See Stoermer, R. Annable, W. G. See Smith, C. L.

Annau, E., significance of fumaric acid for respiration of animal tissues. III. Catalysis by fumaric acid and behaviour of pyruvic acid in liver, A., III, 59.

and Mahr, I., dehydrogenation of pyruvic acid, A., III, 352. and Straub, F. B., oxidation of C₄ dicarboxylic acids by tissue, A., III, 347.

Anrep, G. V., Ayadi, M. S., and Talaat, M., determining carbon dioxide in blood and tissues, A., III, 192.

Barsoum, G.L., and Talaat, M., liberation of histamine by the heart muscle, A., 111, 152. Anres. See Bordas.

Ansay, M., clay and the colloidal state, B., 70.

Anshacher, S., Supplee, G. C., and Bender, R. C., lactoflavin, a necessary growthpromoting dietary factor, A., III, 281. Pellagra-like syndrome in chicks, A., III, 281.

See also Bender, R. C., and Supplee, G. C. Anscheles, J. M., growth of crystals at the expense of grains close to them, A., I, 287. Ansel, G. See Barrett, C. S.

Anselmino, K. J., Eikemann, G., and Hoffmann, F., action of the carbohydrate-metabolism hormone of the anterior pituitary on saturated and unsaturated fatty acids of the liver, A., III, 73.

Herold, L., and Hoffmann, F., effect. of the parathyrotropic hormone of the anterior pituitary in different animals, A., Ill, 73. Action of the pancreatropic hormone of the anterior pituitary in animals, A., III, 149.
Ansheles, O. M., and Golovkov, M. P.,

crystals of sodium ferrocyanide deca-

hydrate, A., I, 171.

Anslow, G. A., method of determining the ranges of charged corpuscles, A., I, 493. Anslow, W. P., jun. See Milas, N. A. Anson, M. L., determination of cathepsin with hamoglobin and partial purification of cathepsin, A., III, 221. Determination of papain with hæmoglobin, A., III, 221. Carboxypeptidase. I. Preparation of crystalline carboxypeptidase. II. Partial purification of pro-carboxypeptidase. III. Determination of carboxypeptidase and pro-carboxypeptidase, A., III, 312, 354,

and Northrop, J. H., calibration of diffusion membranes and calculation of molecular volumes from diffusion coefficients, A., I, 236.

Anspach, S., flotation method for treating white-water [in paper mills], B., 427.

Anstead, R. H., village waste, B., 624.

Ant-Wuorinen, O., colorimetric deter-

mination of iron and copper in wine and other alcoholic beverages, B., 176.

Antelmann, H. See Kolbach, P.

Antener, I., preparation and properties of the osazone of dehydroascorbic acid, A., II, 367.

See also Woker, G.

Anthony, J. K. See Hovorka, F. Anthony, R. L., collisions of a-particles

with sulphur nuclei, A., I, 5.

Antilum Akt.-Ges., and Schwarz, P.,
product which absorbs ultra-violet radiations and can be applied to a surface in the form of a protective layer, (P.), B., 701.

Antioch Industrial Research Institute, Inc. See Bucher, J. E., and Dearing, Le R. M. Antipov-Karataiev, I. N., and Antipova-Karataieva, T. F., measuring adsorp-

tion of potassium by soils, A., I, 234. Antipova-Karataieva, T. F., and Jasinovski, A. N., physico-chemical properties of soils as functions of the nature and relative amount of exchange cations. II., B., 594.

Antipova-Karataieva, T. F., and Simakova, L. T., mountain-forest and meadow soils in North Caucasus, B.,

and Filipova, V. N., changes in solonetzosity of Lower Volga soils by chemical reclamation and irrigation, B., 953.

Filipova, V. N., and Sapelov, A. P. irrigation of Lower Volga soils, B., 954. and Serdobolski, I. P., mobile potash, phosphates, and nitrogen in Lower Volga soils, B., 953.

Antipova-Karataieva, T. F. See Antipov-Karataiev, I. N.

Antisell, F. L., and Copperweld Steel Co., working and treating metals [electrolytic copper deposits], (P.), B., 253.

Antoine, G., silicious particles in animal organs, A., III, 118.

See also Kahane, E.

Anton, E. See Braun, J. von. Antoniadi. See Vodopianov.

Antoniani, C., and Usuelli, F., influence of large doses of vitamin-D on composition of eggs, A., III, 156.

Antonoff, G., change of sign of electric charge in colloidally dispersed and related systems, A., I, 409. Precipitated zinc oxide, (P.), B., 343. Magnesium carbonate, (P.), B., 908.

Antopol, W., Tuchman, L., and Schiffin,

A., choline-esterase activity of human sera with reference to hyperthyroidism, A., III, 268.

See also Sobotka, H., and Tuchman, L.

Antropov, L. See Essin, O.

Antuikov, A.J., effect of sylvinite, applied to chernozem, on sugar-beet crops, B., 170.

Antweiler, H. J., interferometric observations of streaming anomalies at cathodes, A., I, 521.

Antzus, L. I., preparation of a-chloro-ybromopropane, and velocity of addition of HBr to allyl chloride, A., III, 81.

Anwar-ul-Haq, M. See Bhatnagar, S. S. Anziani, P. See Vavon, G.

Ace, I., combined use of two accelerators [for rubber vulcanisation]. VI. Diphenylguanidine and di-o-tolylguanidine, B., 815.

See also Minatoya, S.

Acki, H., y-ray excitation by fast neutrons, A., I, 211.

See also Kikuchi, S.

Acki, K., resistance of different receptors to disinfectants, A., III, 415. Effect of disinfectants on different receptors, A., III, 454. Importance of β-receptors for the life of bacteria, A., III, 488.

Aoki, $Y_{\cdot \cdot}$, Obi, $K_{\cdot \cdot}$, and Tanaka, $H_{\cdot \cdot}$, chemical nature of O-antigens of Bact. typhosum, A., III, 415.

Aoyama, Shin-ichi, and Kanda, E., fluorine at low temperatures. I. Preparation, analysis, and handling of fluorine. II. Vapour pressure at fluorine, A., I, 607, 629.

Aoyama, Shinjiro, and Nanai, K., synthesis of p-nitrophenol from p-chloronitrobenzene, B., 20.

Apard, stability of solventless powder; influence of diphenylamine, B., 1279.

Apel, A. See Scholder, R. Apevalkin, S. I. See Poloskin, E. N.

Apex Smelting Co., zinc-base [die-casting] alloys, (P.), B., 693*.

Apollov, N. A. See Polukarov, M. N. Appel, B., and Jankelson, I. R., treatment of arsenical hepatitis with sodium dehydrocholate; arsphenamine poisoning, A., III, 179.

Appel, F. J., and Elgin, J. C., counter-current extraction of benzoic acid between toluene and water; performance of spray and packed columns, B., 876.

Appel, H., Baker, W., Hagenbach, H., and Robinson, R., synthesis of brazilin and hæmatoxylin. V., A., II, 299.

Apperly, F. L., and Cary, M. K., chloride

and alkali content of the duodenal secretions and their relations to gastric acidity and emptying time, A., III, 169.

Appin, A., Chariton, J. B., and Todes, O. M., thermal decomposition and explosion of methyl nitrate vapour, A., I, 190.

Apple, J., continuous mixer, (P.), B., 740. Applebey, M. P., recovery of sulphur from

smelter gases, B., 905.
Glass, J. V. S., and Horsley, G. F., vapour-phase hydration of ethylene, A., I, 516.

Appleby, V. See Bisbey, B. Appleman, C. O., and Smith, C. L., effect of previous cold-storage on respiration of vegetables at higher temperatures, B.,

Appleman, D. See Cameron, S. H. Appleton, E. V., problems of atmospheric

physics, A., I, 208.

Appleyard, E. T. S., factors influencing resistance of thin metal films, A., I,

Appleyard, E. T. S., and Lovell, A. C. B., electrical conductivity of thin metallic films. II. Casium and potassium on pyrex glass surfaces, A., I, 291.

Appleyard, F. N. See Lyons, C. G. Appleyard, K. C., Pollitt, S. D., and Birtley Go., electric separation of coal from associated impurities, (P.), B., 317. Separation of coal, (P.), B., 409.

Applington, S. Sec Falk, C. R. Apprich, K., and Urban, F. F., reducing power and sulphur derivatives in exudates, A., III, 458.

Apsits, J., soil structure and plant growth, B., 1100.

Apuschkin, K. K., coagulation and peptisation of humic acid by phosphates. I., A., I, 239.

and Kurotschkina, E. A., humic phosphate fertilisers, B., 820. Aquamellis Engineering Co., Ltd. See

Copeland, J. B.

Aquino, D. I., base-exchange properties of Philippine soils, B., 165.

Aradine, P. W. See Line, W. R.

Arakatsu, B., Kimura, K., and Uemura, Y., expulsion of neutrons from lead by cosmic rays, A., I, 543.

Araki, H. See Urushibara, Y.

Aram, E. H. G. See Brit. Coal Distillation. Arany, S. A., composition of well-water of the Hungarian Great Plain, A., I, 481. and Babarczy, J., salt efflorescences and ground waters of the Hungarian Great Plain, A., I, 481.

Arbor, A. See Dubpernell, G.

Arbusov, G. A. See Tschitschibabin, A. E. Arbusov, V. A. See Chomiakov, K. G. Arbusova, I. A. See Salkind, J. S.

Archangel, N. D. See Mancini, J. Archangelski, A. D., iron sulphide in Black Sea deposits, A., I, 585.

Archarov, V. I., relation between structure of scale and speed of oxidation of iron at high temperatures, B., 43. Structure of surface layer of polished metal, B., 50. Preparation of cobalt anticathodes for X-ray tubes, B., 582.

and Boenkov, M. V., protective action of chromium coatings against amalgamation of copper, B., 568.

and Fedorov, J. B., structure and properties of electrolytic coatings. New methods for studying porous structure of electrolytic coatings, B., 52,

and Kurdjumov, G. V., rational degree of accuracy in applying X-ray analysis methods to factory laboratories, B., 1073.

and Petrova, A. P., changes in microstructure of individual grains of metal

during heat treatment, B., 559.

Archbutt, S. L. See Schofield, T. H.

Archer, H. E., and Discombe, G., sulphæmoglobinæmia, its cause and prevention; treatment with sulphanilamide. A., III, 370.

Archer, N. See Imperial Chem. Industries. Archer, R. S., Burns, J. L., and Brown, V., troubles [in metals] due to grinding or machining, B., 1219.

Archer-Daniels-Midland Co. Sec Long.

Archibald, F. M., Beamer, C. M., and Standard Alcohol Co., ketones, (P.), B., 118.

Janssen, P., and Standard Alcohol Co., purification of olefines, (P.), B., 416. See also Standard Oil Development Co.

Archibald, J. G., dried blood as a source of protein for dairy cows, B., 1264.

Archibald, P. K. Sec Internat. Bitumen Emulsions, and Montgomerie, J. A. Archibald, R. C. See Giauque, W. F.

Ardaschev, B. I., bromometric determination of carbazole and anthracene in crude and refined anthracenes, B., 1168.

Ardenne, M. von, new method for the production of light sources of constant energy in the visible spectrum, A., I, 595.

Arditti, G. See Dubrisay, R. Ardoint, P. See Cahen, R.

Ardy, C., and Bellini, L., experimental vitamin deficiency and agents which raise basal metabolism. I. Gascous metabolism of animals after various periods on scorbutic diet, at body and low temperatures. II. Inhibition of rise in basal metabolism caused by 2:4-dinitrophenol in animals in an advanced state of scurvy, A., III, 326.

and Gallo, Giuseppe, effect of phloridzin on liver-glycogen and residual nitrogen in nephrectomised animals, A., III, 391. See also Gallo, Giuseppe.

Arend, A. G., removing stains from brass

coils, B., 569.

Arens, H., new [photographic] blackening surfaces, B., 622.

Arens, K., ash analysis in the investigation of living functions of plants, A., III,

Arens. R. See Necheles, H.

Arest-Jakubovitsch, R. E. See Alimarin,

Argabrite, G. M., processing of leather, (P.), B., 375*. Argue, G. II. See Boomer, E. H.

Arguelles, A. S. Sce Rosell, D. Z.

Argyle, C. S., and Dyson, G. M., constitution and reactions of thiocarbonyl tetrachloride. IV. Reaction with secondary and tertiary amines, A., II, 491.

Ariente, P. J., and Sayles Finishing Plants, thermo-adhesive textile fabric and

process, (P.), B., 664.

Arii, K., sorption of chlorine by active charcoal. I., A., I, 129. Sorption of heavy water vapour by active charcoal, A., I, 561.

Arima, K., influence of the thymus hormone on poisonous action of opium

alkaloids, A., III, 267.

Arimori, T., preparation of pure alumina from Manchurian aluminous shale. I. Treatment of Fukushu shale with sulphuric acid, B., 1335.

Arion, E. See Cerchez, V.

Aristo Corporation. See Stahl, R.

Arisz, W. H., and Oudman, J., influence of aggregation on transport of asparagine and caffeine in the tentacles of [the insectivorous plant] Drosera capensis, A., III, 304.

Ariyama, Kanetaka, electron theory of

metals, A., I, 449.

Ariyama, Kyôzo, theory of negative adsorption of Debye-Hückel electrolytes, A., I, 76. Theory of surface tension of Debye-Hückel electrolyte, A., 1, 179. Surface tension of ternary solutions, A., I, 179, 300. Osmotic coefficient and activity coefficient at surface, A., I, 179. Theory of surface tension of aqueous solutions of inorganic acids, A., I, 300. Theory of surface tension of aqueous solutions of dipolar ions, A., I, 458. Theory of the expanded film, A., I, 500.

Ariyama, N., and Kitasato, T., disintegration of methylated glucoses in alkaline medium, A., II, 399.

Arjona, E., comparative therapeutic examination of ethylapoquinine and opto-

quin, A., III, 124.

Ark, P. A., variability in fire-blight organism Erwinia amylovora, A., III, 273. Effect of enzymes and amino-acids on crown gall tissues, A., Ill, 286.

Arkel, A. E. van, and Janetzky, E., iodofluoromethane, A., II, 174.

and Lebbink, F. J., phosphorus sulphobromide, A., I, 258.

Arkel, C. G. van, colorimetric determination of small quantities of morphine, A., II,

Arlievski, $P.\ D.$ See Chimuschin, $F.\ F.$ Arlman, $E.\ J.$, basic properties of orthophosphoric acid, A., I, 628.

Arloing, F., Morel, A., and Josserand, A., chemotherapy of cancer by complex soluble salts of copper and titanium with ascorbic or dehydroascorbic acid, A., III, 205.

Morel, A., Josserand, A., and Perrot, L., stereochemical configuration of the organic component and anti-tumour activity of metal-ascorbic acid com-

plexes, A., III, 135.

Morel, A., Josserand, A., Thévenot, L., and Caille, R., effect of vitamin-C and its organo-metallic complexes on the development and the fermenting power of B. coli, A., III, 490. Action of vitamin-C and its organo-metallic compounds on development and fermenting power of the Vibrio septique, A., III, 496.

Thevenot, L., and Viallier, J., effect of extracts of organs on homogeneous liquid cultures of B. tuberculosis, A., III, 100. Effect of decreased atmospheric pressure and anaërobiosis on homogeneous liquid cultures of human B. tuberculosis, A., III, 100,

See also Mourignand, G.

Armacost, W. H. See Wohlenberg, W. J. Armand, S. See Mouriquand, G.

Armour & Co., aldehydes, (P.), B., 214. Compositions from coal tar and higher fatty acid chlorides, (P.), B., 413*. [Aliphatic] nitriles, (P.), B., 759. Inhibition of crystallisation in coaltar distillates, (P.), B., 872. Lubricating oils, (P.), B., 1307*.

See also Fenger, F., Ralston, A. W.,

and Schultz, K.

Arms, G. L., coal washing and the Baum jig, B., 101.

Armstrong, C. H., and Brown, N. H., thermostatic-control devices, (P.), B.,

Armstrong, E. F., sugars in solution and

in the cell, A., II, 444.

Armstrong, E. L., and Kuder, M. L., limitations of colorimetric analyses by

present methods, A., I, 331.

Armstrong, E. V., Thomas Cooper as an itinerant chemist, A., I, 381.

Armstrong, H. C., smoke-prevention problems in the iron and steel industry, B.,

Armstrong, H. H., and Menefee, A. B., electrodeposition of tungsten, (P.), B., 459. Electrodeposition of tungsten alloys, (P.), B., 459.

Armstrong, J. T., and Jeffrey Manuig. Co., reducing machines, (P.), B., 631. Armstrong, L. See Cooley, T. B.

Armstrong, P. A. E., and Rogers, R. R., composite ferrous bodies, (P.), B., 931.

Armstrong, R. L., apparatus for purifying

and filtering liquids, (P.), B., 633.

Armstrong, W. D., and Brekhus, P. J., chemical constitution of enamel and dentine. I. Principal components, A., III, 455.

Armstrong, W. J., and Jeffrey Manuig. Co., [rotary] reducing machines, (P.), B., 1146. Rotary reducing machine, (P.), B., 1146. Pulveriser, (P.), B., 1146. Arnaud, F. W. F., origin of the Gutzeit

test, A., I, 45.

Arnaud, G. See Bois, D. Arnaudeau, J., gum formation in gas, B., 1294.

Arnaudo, A. F., determination of phenols in blood, A., III, 451. See also Castex, M. R.

Arnd, T., and Segeberg, H., influence of electrolytes on reduction of nitrates with Cu-Mg (alloy) and Cu-Zn powder, A., I, 148.

Arndt, F., action of the sulphonyl group, A., II, 226.

Loewe, L., and Isik, H., nitronic ester of phenylcyanonitromethane, A., II,

and Neumann, F., determination of methoxyl, A., II, 476.

Arndt, G., action of the adrenal extract, cortidyn, in Addison's disease, A., III,

Arness, W. B., and Rustless Iron Corp. of America, rustless iron, (P.), B., 147.

Arnfelt, II., titration errors in neutralisation, A., I, 323.

Arnold, A., Kline, O. L., Elvehjem, C. A., and Hart, E. B., growth factor required by chicks; essential nature of arginine, A., III, 61.
Arnold, E. See Thermal Industrial &

Chem. (T.I.C.) Res. Co.

Arnold, E. A., dielectric constant as a physical constant for testing of oils and other fuels, B., 1006.

Arnold, F. See Bleyer, B. Arnold, G. E., plankton and insect-larvae control in California waters, B., 193.

Arnold, H. See Braun, J. von, and Wagner-Jauregg, T.

Arnold, H. R. See Du Pont de Nemours & Co., E. I.

Arnold, L. K., air infiltration through insulating board, B., 1037.

Arnold, M. H. M., Hugill, J. A. C., and Hutson, J. M., formation and constitution of sulphur nitride and so-called

hexasulphamide, A., I, 41. Arnold, O.M., and Williams, J.W.resistance and capacity behaviour of strong electrolytes in dilute aqueous solution. I. Simultaneous observation of conductance and dielectric constant at high radio frequencies. II. Dispersion of electrical conductance, A., I, 139.

Arnold, P. T. D., and Becker, R. B., influence of preceding dry period and of mineral supplement on lactation, A., III, 376.

Arnold, T. I. See Klinov, I. J.

Arnoldi, L. V., and Fortunatova, K. R.,
nutrition of Black Sea fishes, A., III, 381.

Arnon, D. I., ammonium and nitratenitrogen nutrition of barley at different seasons in relation to $p_{\rm H}$, manganese, copper, and oxygen supply, B., 1251. Arnot, E., felspar in glass, B., 910.

Arnot, F. L., new process of negative ion formation. II. III. Energy distribution of negative ions and accommodation coefficients of positive ions, A., I, 274. Continuous β-ray spectrum, A., I, 438.

and Milligan, J. C., negative ion form-

ation, A., I, 4.

Arnott, W. M. See Dunlop, D. M. Arnott, W. S. See Durfee, T.

Arnoux, M., apparatus for filtration under reduced pressure on the micro- and semi-micro-scale, A., I, 429.

Arnow, L. E., colorimetric determination of the components of 3:4-dihydroxyphenylalanine-tyrosine mixtures, A., II, 314. Formation of dopa [l-3:4dihydroxyphenylalanine] by exposure of tyrosine solutions to ultra-violet radiation, A., II, 419. Proposed chemical mechanisms for the production of skin erythema and pigmentation by radiant energy, A., III, 423.

See also Bernhart, F. W.

Arnquist, W. N., filtering action of porous media, B., 854.

Aron, M., serological investigations on substance present in urine of cancer patients, A., III, 123.

Aronov, S. See Agroskin, A.

Aronovsky, S. L., and Gortner, R. A., cooking process. IX. Pulping wood with alcohols and other organic reagents, B., 25.

and Northwest Paper Co., alcoholic treatment of ligneous cellulosic material,

(P.), B., 428. Aronsohn, H. G., and Andrews, E., nitrogen content of bile, A., III, 57. Non-bacterial cholecystitis; mechanism of acidification of bile in the gall bladder, A., III, 58.

Arontschikova, N. S. See Katz, S. A. Arrhenius, S., relaxation time and dipole

moment of gliadin, A., I, 133.

Arrington, L. B., and Shive, J. W., oxygen and carbon dioxide content of culture solutions in relation to cation and anion nitrogen absorption by tomato plants, B., 169.

Artamanov. Sec Lotorev.

Artamonov, B. P., influence of cathode polarisation on velocity of corrosion of iron and steel by electrolyte solutions, and application of cathodic protection against corrosion, B., 918. See also Stender, V. V.

Artamonov, N. S., and Bachtiarova, Z. C. determination of free arsenic trioxide in calcium arsenite, B., 340.

and Schadrina, S. I., solubility of sodium hyposulphite (Na₂S₂O₄) in presence of sodium chloride or hydroxide, and ethyl alcohol, A., I, 456.

Artamonov, P. See Botkovskaja, E.

Arthaud, R. See Roche, A. Arthur, P. See West, W.

Arthus, A., and Provoost, M., cestrogenic action of various products obtained during refining of petroleum, A., III, 151.

Artières, S. Sec Lautié, R. Artigas, C. M., and Jané, A. M., transformation of nitrogenous matter during fermentation, B., 607.

Artofex Engineering Works, Ltd., kneading

and mixing machines, (P.), B., 856. Artom, C., simultaneous bilateral oxidation of dibasic fatty acids, A., II, 135.

Artom, C., Gagliani, M., and Ventura, E., metabolism of the higher hydroxyaeids, A., III, 469.

and Sarzana, G., calcium citrate complexes, A., II, 322. Synthesis of phospholipins during absorption of fats, A., III, 468.

Sarzana, G., Perrier, C., Santangelo, M., and Segré, E., rate of "organification" of phosphorus in animal tissues, A., III, 262. Phospholipin synthesis during fat absorption, A., III, 345, 468.

and Zummo, C., action of pancreas lipase on aa-dioctoyl-β-monopalmitin and aa-dipalmito-\(\beta\)-mono-octoin, A., III, 429.

Aruina, A. S., rapid determination of silicon in silumin, B., 1224.

Aruja, A. See Perlitz, H. Arventi, B. I., synthesis of 1:2-diphenylcoumarones. II., A., II, 347.

Arveson, M. H. See Standard Oil Co.

Arvin, J. A. See Du Pont de Nemours & Co., E. I.

Arzibischev, S. A., diffusion of copper in rock-salt, A., I, 126.

and Borisov, N. V., mobility of copper ions in rock-salt, A., I, 126.

s, J. van, colorimetric determinations with the Lovibond tintometer, A., I, 379.

Asada, T., and Honde, E., effect of rectified current from a Tunger valve on the electrolytic separation of heavy water, A., I, 379.

Asada, Y., aluminium ore, A., I, 585.
Asahina, Y. [with Yamaguti, K.], sulphonation of camphor, A., II, 201.

and Hayashi, H. [with Tasaka, M.], lichen substances. LXXVIII. Psoromic acid. II., A., II, 292.

and Hiraiwa, M., lichen substances. LXXXVI. Synthesis of divaricatic and anziaic acid, A., II, 421.

and Kusaka, T., lichen substances. LXXXIII. New depside, bonic acid; synthesis of bonic acid and of homosekikaic acid, A., II, 420.

and Kusaka, T. [with Sasaki, T.], lichen substances. LXXXIV. Occurrence of homosekikaic acid in Cladonica, A., II, 421.

Mayeda, S., and Yanagita, M., constitution of usnic acid, A., II, 464.

and Momose, T., a-hydroxysantonin, A., II, 297.

and Nogami, H., lichen substances. LXXXI. Glomelliferic acid. I., A., II, 378.

and Sakurai, Y., lichen substances. LXXIII. Synthesis of dimethyl squamatate, A., II, 102.

and Takagi, S., artemisia ketone, A., II, 177.

and Tanase, Y., lichen substances. LXXII. Constitution of squamatic acid, A., II, 102.

and Tnkamoto, T., reduction products of 2:6-diketocamphane, A., II, 201.

and Yanagita, M., lichen substances. LXXIV. Usnic acid. II., A., II, 159.

and Yanagita, M. [with Kawamura, S.], lichen substances. LXXXII. Usnic acid. III., A., II, 393.

and Yanagita, M. [with Sakurai, Y.], lichen substances. LXXVII. Lichen fatty acids from Nephromopsis endocrocea, A., II, 134.

Asahina, Y., and Yasue, M., lichen substances. LXXVI. Constitution of lobaric acid. III. LXXIX. Components of Cetraria islandica (L.), Ach. II. LXXX. Components of so-called Thamnolia vermicularis, f. taurica, A., II, 151, 290, 378.

and Yosioka, I., lichen substances. LXXV. Syntheses of gyrophoric acid. II. Umbilicarinic and umbilicaric acid. LXXXV. Synthesis of perlatolic and imbricaric acid, A., II, 151, 421.

Asai, T., alcohol manufacture from Jerusalem artichokes. I. Saccharification of Jerusalem artichoke; acid hydrolysis. I. and II., B., 964.

See also Takahashi, Teizo.

Asana, R. D., influence of light and temperature on absorption of nutrients by plants, B., 1250. Asch, A. B. See Laughlin, W. C.

Aschehoug, V. See Lunde, G.

Aschenbrenner, J., non-stationary gas flow in conduits of varying cross-section, B., 1143.

See also Fischer, H.

Aschklnazi, J. V., and Rabinovitseh, M. S., preparation of 3:4-methylenedioxytoluene from 3:4-dihydroxytoluene, A., II, 189.

Aschmann, U., electric heating in the lightmetal working industry, B., 1222.

Aschner, M., cultivation of cellulose. splitting bacteria on membranes of Acetobacter xylinum, A., III, 316.

Asdell, S. A., Brooks, H. J., Salisbury, G. W., and Seidenstein, H. R., physiology of mammary development and lactation, A., III, 230.

Ash, J. See Burge, W. E. Ashby, G. E. See Frondel, C.

Ashdown (Birmingham) Ltd., H. E., and Snell, A. G., spinning pots for artificial silk, etc., (P.), B., 1038.

Asher, L., thymocrescin and vitamins, A., III, 363.

Ashford, C. A. See Wilkinson, J. F. Ashley, J. N., preparation of 4-methoxy-

2:5-toluquinone, A., II, 425. Hobbs, B. C., and Raistrick, H., biochemistry of micro-organisms. LIII. Crystalline colouring matters of Fusarium culmorum (W. G. Smith),

Sacc., and related forms, A., II, 159. Ashmore, S. A., and Hughes, A. W. McK., coal-tar naphtha distillates for destruction of bed-bugs, B., 624.

Ashton, F. L., acceleration of digestion in the Kjeldahl method as applied to soil and grass analysis, B., 595.

Ashworth, A. A., failure of the standard method of determining the bituminous content when applied to a naturally impregnated limestone, B., 748.

Ashworth, P., machines for treating yarn with liquid and subsequently drying, (P.), B., 662.

Ashworth, U. S. See Johnson, S. R.

Asimov, G. J., and Krouze, N. K., lactogenic preparations from the anterior pituitary and the increase of milk yield in cows, B., 970.

Askew, F. A., surface films of resinols

and allied substances, A., I. 76.

Askew, H. O., composition of Pinus radiata needles, A., III, 243.

and Dixon, J. K., cobalt status of animal organs from South Island (N.Z.) drench experiments, B., 957. Influence of cobalt top-dressing on the cobalt status of pasture plants, B., 957. Askew, H. O., and Josland, S. W., rate of excretion of cobalt by sheep after drenching with cobalt chloride, A., III, 386.

and Thomson, R. H. K., occurrence of internal cork of apples in central Otago, New Zealand, B., 713.

Thomson, R. H. K., and Kidson, E. B., boron status of New Zealand fruit soils, B., 1253.

See also Kidson, E. B., and Rigg, T. Askey, P. J., production and utilisation of domestic coke, B., 103.

Asloglou, E., modification of silver sulphide

images, B., 731.
Asmaev, P. G., commercial-scale fermentation [of tobacco], B., 840.

Asmussen, R. W. See Christiansen, J. A. Asnes, B., and Dennison Manufg. Co., paper product, (P.), B., 1038.

Asnis, R. E. See Conn, R. C. Aso, M. See Ueno, Sei-ichi.

Asprey, G. F., automatic control of a stream of air produced by an ordinary suction pump, A., I, 583. Relation between exosmosis and salt absorption by potato tuber tissue previously treated with various salt solutions, A., III, 47.

Asreegy, M. I. E. See Samaan, K. Assarson, G., hydrated compounds in the system CaO-Al₂O₃-H₂O(liq.) and hydr-

ation of anhydrous calcium aluminates, A., I, 194. Chemistry of hydration of calcium aluminates and cements, A., I, 371.

Assenhajm, D. See Janicki, J. Asser, E., paints for breweries, B., 1087. Assheton, E., air-drying asphaltum finishes,

Associated Dyers & Cleaners, Ltd., and Fort, M., dry cleaning, (P.), B., 337.

Associated Electric Laboratories, Inc., temperature-controlling arrangements, (P.), B., 149. Magnetic cores, (P.), B., 359, 460.

Associated Oil Co. See Lazar, A., and Stark, D. D.

Associated Paper Mills, Ltd., and Hendry, R. S., drying of coated paper, (P.), B.,

Astad, A. See Schmidt-Nielsen, Sigval. Astaflev, V. A., device for reading burettes, A., I, 202.

Astascheva, A. A. See Postnikov, V. F. Astbury, H., importance of temperature control in vitreous enamelling, B., 1204. Astbury, W. T., and Wrinch, D. M., intramolecular folding of proteins by keto-enol interchange, A., II, 357.

See also Preston, R. D.

Aston, B. C., report of chemistry section, A., III, 204.

Bruce, J. A., and Thompson, F. B., chemistry of weed killers. VI. Bi-

sulphite group, B., 597. Grimmett, R. E. R., and Shorland, F. B., pampas grass (Cortaderia selloana); supplementary fodder for ruminants in New Zealand, B., 617.

Aston, F. W., isotopic weights by the doublet method, A., I, 106. Packing fractions of krypton and xenon, A.,

Bohr, N., Hahn, O., Harkins, W. D., and Urbain, G., second report of the Committee on Atoms of the International Union of Chemistry, A., I,

Aston, J., corrosion in relation to engineering structures, B., 354.

Aston, J. G., and Messerly, G. H., heat capacities and entropies of organic compounds. II. Thermaland vapourpressure data for tetramethylmethane from 13-22° abs. to the b.p.; entropy from its Raman spectrum, A., I, 124.

Siller, C. W., and Messerly, G. H., heat capacities and entropies of compounds. III, Methylorganic amine from 11.5° abs. to the b.p.; heat of vaporisation and vapour pressure; entropy from molecular data, A., I, 557.

Astron Akt.-Ges. See Trenzen, C.

Astruc, H., influence of sulphurous acid of concentrated must on its fermentation and on quality of the wine produced, B., 176.

Asundi, R. K., Jan-Khan, M., and Samuel, R., spectra of SeO and SeO, A., I, 60. and Parti, Y. P., emission and absorption band spectra of selenium, A., I, 589.

and Samuel, R., dissociation of N. A., I, 223. Structure of N2+ and its bearing on the theory of valency, A., I, 285.

Aszkenazy, C., Stern, K., and Willheim, R., activation of glycolysis by carotene, A., III, 469.

Aszódi, Z., effect of vitamin-C on composition of blood, A., III, 326.

Atabekova, A. J., action of X-rays on dormant and germinating seeds, A., III,

Atanasiu, I. A., electrometric analysis of cerium-lanthanum mixtures, A., I. 328,

and Babor, M., electrolytic separation of lanthanum and thorium from organic

solutions, A., I, 90.
and Cernatescu, R., analysis of the water
of the river Bahlui (Roumania), A., I, 269. Moldavian water courses, A., I, 269.

and Velculescu, A. I., platinum nickel system in electrometry. IV. Reactions in acid titrations, A., I, 188.

Atanasoff, J. V., and Brandt, A. E., application of punched-card equipment to the analysis of complex spectra, A., I, 331. Atchley, D. W. See Stahl, J.

Ateliers Neyret-Beylier. See Thorsen, K. A.

Aten, A. H. W., polarographic measurements, A., I, 141.

Aten, A. H. W., jun., b.p. of organic compounds. I. Formula of Boggio-Lera. II. Properties of paraffins, A., I, 294, 452.

Athanasiu, G., change of photo-voltaic effect with time of illumination, A., I, 221.

Athawale, C. R. See Bal, D. V.
Atkeson, F. W., Peterson, W. J., and
Aldous, A. E., carotene content of
pasture plants, B., 1265. See also Woods, E.

Atkin, I., serum-calcium in the psychoses, A., III, 206.

Atkin, L. See Kirby, G. W., and Schultz, A. Atkins, C. See Cuthill, R.

Atkins, G. A. See Davies, William.

Atkins, G. R. See Imperial Chem. Industries.

Atkins, S. A. See Du Pont de Nemours & Co., E. I.
Atkins, W. R. G., sodium diethyldithio-

carbamate for detecting solubility corrosion of metals, A., I, 263.

Ball, N. G., and Poole, H. H., photo-

electric measurement of the diurnal variations in daylight in temperate and tropical regions, A., I, 436.

Atkinson, A. J., "okrin" as an adjuvant in treatment of peptic ulcer, A., III, 16. Atkinson, F. S., underground gasification of coal in the U.S.S.R., B., 638.

Atkinson, J. D., control of corky-pit of apples in New Zealand, B., 378. Injection of apple trees in New Zealand, B., 1253.

Atkinson, R. D'E., atomic synthesis and stellar energy. III., A., I, 109. Atkinson, R. G., Brewer, R. E., and Davis,

J. D., coal plasticity, B., 998. See also Brewer, R. E.

Atkinson, R. H., electrodeposition of platinum, B., 579.

See also Johnson, C.

Atlantic Refining Co. See Birkhimer, E. R., Boyd, J. H., jun., Ferris, S. W., Funsten, S. R., Geniesse, J. C., Henderson, L. M., Kurtz, S. S., jun., Malisoff, W. M., Oberseider, J. L., Peterkin, A. G., jun., Rose, H. J., and Weir, H. M.

Atlas Ago Chemische Fabrik Akt.-Ges., [highly polished] artificial leather, (P.),

B., 230.

See also Locker, G.

Atmospheric Nitrogen Corporation. See Brown, R. L., Datin, R. C., De Rewal, F. J., Kniskern, W. H., Lawrence, C. K., O'Leary, J. J., Porter, F., Rowland, W., and Weston, C. F.
Atroschenko, V. I. See Adadurov, I. E.

Attfield, G. C., paints for maintenance of paper mills, B., 428.

Attia, A. B. See Azadian, A.

Atwell, H. V., and Gasoline Products Co., treatment of hydrocarbon oil, (P.), B., 646. Coking of hydrocarbon liquids, (P.), B., 1016, 1160.

and Gray Processes Corp., treatment of cracked hydrocarbon distillates, (P.),

B., 4I3.

See also Sullivan, P. H.

Atwell, W. J., effects of administering adrenotropic extract to hypophysectomised and thyroidectomised tadpoles, A., III, 400.

Aub, J. C., Tibbetts, D. M., and McLean, R., influence of parathyroid hormone, urea, sodium chloride, fat, and of intestinal activity on calcium balance, A., III,

Aubel, C. E., and Hughes, J. S., nutrient requirements of swine, B., I404. Hughes, J. S., and Leinhardt, H. F.

phosphorus requirements in ration of growing pigs, B., 977.

Aubel, E., rôle of nitrates in biological oxidations, A., III, 427.

and Egami, F., deamination of l-alanine, A., III, 34.

Schwarzkopf, O., and Glaser, oxidation of leuco-methyene-blue by nitrates and nitrites, A., II, 309. Re-development of colour in leuco-derivatives by nitrates in presence of bacteria, A., III, 276.

Aubert, A., thermal-conductivity coefficients of heat-insulating and refractory materials, B., 851.

Aubert, G., determination of phosphate requirement of soils, B., I64.

Aubertin, A. See Moreau, L.

Auchinachie, D. W., milk and nutrition. IV. Effect of pasteurisation on availability of calcium and phosphorus, B.,

Auden, H. A. See Distillers Co. Audibert, E., state of methane in coal, B.,

Audibert, E., and Cheradame, R., use of grisoudynamites in a firedamp atmosphere, B., 1412. Audic, R. See Pénan, H.

Audubert, R., energy of activation of actinic reactions accompanying the pyrolysis of azides, A., I, 370. Ultra-violet emission spectrum of slow thermal dissociation of silver azide, A., I, 493. Mechanism of chemical reactions, A., I, 521. Emission of ultra-violet rays during slow decomposition of azides, A., I, 569.

and Muraour, H., emission of ultra-violet rays during slow decomposition of azides, A., I, 164.

See also Levy, M. M. R.

Auer, H., and Mann, K. E., magnetic investigation of the system zinc-aluminium, A., I, 73.

Auerbach, M. E., volumetric determination of atebrin dihydrochloride and rivanol lactate, B., 728.

Auerbach, O. See Friedman, M. M.

Auerbach, R., disperse gases. I. and II., A., I, 27, 460. Technology of dispersion of gases [in liquids], B., 855. See also Ciatti, P.

Auger, P., and Bertein, F., analysis of corpuscular cosmic radiation under a thickness of 8 metres of soil, A., I, 340. and Ehrenfest, P., jun., tracks of cosmic rays obtained with a Wilson-Blackett chamber under special conditions, A., I, 340. Showers produced by the soft

group of cosmic rays, A., I, 390. Ehrenfest, P., jun., Freon, A., and Fonrnier, A., angular distribution of hard corpuscular cosmic rays, A., I,

Ehrenfest, P., jun., Freon, A., and Grivet, (Mmc.) T., mechanism of production of cosmic showers, A., I, 439.

and Meyer, (Mme.) G., secondary effects of cosmic rays in free air and under-

ground, A., I, 213.

Auger, V., and Ivanov, (Mile.) N., phosphates of the type MilNH₄PO₄, A., I, 195. Molybdenum blues; phosphoceruleomolybdic acid; amorphous colloidal molybdenum-blue, A., I, 373, 474.

Auguste, C., and Rigaud, E., inhibition of fixation reaction in presence of Besredka's antigen by the scrum fraction precipitable by hydrochloric acid, A., III,

Augnsti, S., formation of mercuriammonium compounds from mercuriammonium nitrate by double decomposition. III. Mercuriammonium bromate, A., I, 146. Reaction of copper salts and hydrobromic acid and its application to the microchemical detection of cupric cation, A., I, 426. Microchemical determination of cupric cation with ammonia, tartaric acid and fructose, potassium ferrocyanide, and potassium ferrocyanide in presence of

ammonia, A., I, 532, and Pascalino, V., sensitivity of borax and microcosmic beads for detection of

cations, A., I, 427. Angustin, H. See Schultz, J.

Anld, S. J. M., susceptivity of mineral

lubricating oils in use, B., 110. Harris, W. R., and Vacuum Oil Co., liquids used in fluid-pressure apparatus such as hydraulic brake mechanisms and for similar purposes, (P.), B., 1290. Auler, H., nutrition and cancer, A., III, 12. Aulich, practical application of the moulding sand test in the foundry industry, B., 688.

Aulin, G., and Erdtman, H., pentahydroxybenzene series. I., A., II, 455. Aull, J. C., jun. See Kinaird, F. W.

Ault & Wiborg Corporation. See Bragdon, C. R.

Aumaréchal, J., substances in the colloidal state, (P.), B., 510.

Auméras, M., and Mounic, M., magnetism of ferric chloride solutions. I., A., I, 237. Calculation, by additivity, of degree of hydrolysis of ferric chloride solutions, with their magnetic susceptibility coefficients, A., I, 241.

and Vergnoux, (Mlle.) A. M., technique for examining infra-red absorption of organic substances. I. II. Infra-red absorption spectrum of pure and dissolved benzene, A., I, 344.

Aumüller, W., Fromherz, H., and Strother, C. O., optical interaction of chromo-

phores in the same molecule, A., I, 597.

Aunis, G. See Muraour, H.

Aurangabadkar, R. K. See Wad, Y. D. Aureden, H., welding of thick-walled [metal] containers, B., 1352.

Aurelius, J. E., Herlong, E. S., and Nitardy, F. W., stability of anasthetic ether; formation of aldehydes and peroxides in stored ether, B., 496.

Auricchio, L., and Chieffi, A., iron-peptonate reaction for diagnosis of Leishmannia interna in children, A., III, 125.

Auriol, R. F., by-products of steamed rice: oil, soap, press-cake, B., 1119.

Aurioles, D. G., refining [of sugar liquors] with the use of chlorine, B., 962. Invert syrups, B., 1392.

Ausschuss für wirtschaftliche Fertigung, and Claus, W., general directions for designating raw, half-finished, finished, and scrap materials and for collecting and sorting non-ferrous base-metal scrap, B., 797.

Austin, C. R. See Jenkins, C, H, M, Austin, J. B., and Una Welding, welding rod, (P.), B., 458.

Austin, M. D., and Jary, S. G., insect and allied pests of cultivated mushrooms, B., 481.

See also Jary, S. G.

Austin, M. M., and Fansteel Metallurg. Corp., [tantalum-iron or -nickel] alloys, (P.), B., 1227.

Austin, O. V., fertiliser production from sewage, (P.), B., 172.

Austin, P. R., Bousquet, E. W., and Lazier, W. A., phthalide. I. Hydrogenation of phthalic anhydride, A., II, 377.

See also Du Pont de Nemours & Co., E. I.

Austin, W.C. See Humoller, F.L.Auterinen, A., [ring] conversion reaction in reduction of menthones by Clemmensen's method, A., II, 507.

Autoxygen, Inc., and Kokatnur, V. R., preservation of food substances, (P.), B., 979. Anhydrous substances [salts], (P.), B., 1336.

Auwers, K. von, spectrochemistry of pyridine and pyridone derivatives, A., 1, 285. Atomic refractivities of amidenitrogen, A., I, 397. Benzoylmethylcarbinol and acetylphenylcabinol. III., A., II, 145. Acid amides, A., II, 281.

[with Hügel, R., and Ungemach, O.], structure of indazoles, A., II, 167.

Auwers, K. von, and Hügel, R., spectrochemistry of unsaturated compounds, A., I, 285.

and Ludewig, H., ketonic derivatives of acetylbenzoyl, A., II, 63.

Ludewig, H., and Müller, A., $\alpha\beta$ ketols, A., II, 64. Auwers, O. von, rules of magnetic binding;

stereomagnetism, A., I, 606. Avaliani, K. E. See Rosenberg, M. A.

Avdeeva, A. V., reaction of sulphur dioxide with carbon disulphide and carbon oxysulphide, A., I, 625. Catalytic de-oxygenation of nitrogen-hydrogen mixtures, B., 1045.

and Liudkovskaja, M. A., catalytic purification of nitrogen-hydrogen mixture from organic sulphur, B.,

Avens, A. W. Sco Pearce, G. W.

Averell, P. R., and Walden, G. H., jun., chemical and X-ray investigation of barium sulphate contaminated with permanganic acid, A., I, 372.

Averill, M. E. See Baxter, G. P.

Avery, G. S., jun., and Burkholder, P. R., polarised growth and cell studies on the Avena coleoptile, phytohormone test object, A., III, 502.

Burkholder, \hat{P} . \hat{R} ., and Creighton, H. B., plant hormones and mineral nutrition, A., III, 160. Production and distribution of growth hormone in shoots of Aesculus and Malus and its prob-

able rôle in stimulating cambial activ-

ity, A., III, 285.

Avidon, M. See Nikitin, N. I. Avnsoe, T., Posselt, E., and Internat. Cement Corp., baffled rotary [cylindrical cement] kiln, (P.), B.; 1209.

Avoni, G. See Scagliarini, G. Avons, C. H. See Mackay, J. G. Avramenko, L., and Kondrateev, V., induced predissociation in the visible spectrum of bromine, A., I, 342.

Avrorova, T. A. See Fedorov, B. P. Avrunina, A. M. See Davidov, A. L.

Awano, S. See Tanaka, Keikichi.

Awe, W., constituents of the common poppy (Papaver rhaas), A., III, 52. Seed soil of the common field poppy, B., 806, 1366.

[with Etzrodt, H., and Unger, H.], berbine derivatives. V. Constitution of 8:9:16:17-tetradehydrocorydalinium salts, A., II, 435.

and Unger, H., berbine derivatives. IV. Hydrogenation with amalgamated zinc and an addition of amalgamated cadmium, A., II, 219. See also Feist, K.

Axe, W. N., and Bratton, A. C., amplified distillation of binary aliphatic acid mixtures, A., II, 397.

Henson, D. D., and Schuhardt, V. T., germicidal properties of nitrogen bases from transformer-oil extract, B., 984.

Axenov, G., detection of elastic strains in metals by X-ray methods, B., 793.

Axilrod, B. M. See Kline, G. M.

Axline, R. A., maintenance with the metallising process, B., 794.

Axtman, G. See Bonner, J.

Aximayer, J. H. See Cook, D. H. Ayadi, M. S. See Anrep, G. V. Ayers, G. W., jun, and Gasoline Antioxidant Co., treatment of hydrocarbon motor fuels, (P.), B., 755. See also Hyman, J.

Ayers, S. II., Lang, C. W., and Crown Cork & Seal Co., treatment of milk

products, (P.), B., 1405.

Aykroyd, W. R., and Krishnan, B. G., cheap "well-balanced" diets, A., III, 303. Carotene and vitamin-A requirements of children, A., III, 324.

Ayling, E. E. See Hinkel, L. E. Aylward, F. X., chemical nature of the Reynals spreading factor from mam-

malian testis, A., III, 416.

Blackwood, J. H., and Smith, J. A. B., lipæmia and milk-fat secretion in ruminants, A., III, 91.

and Holt, L. E., jun., nature of the lipotropic agent in pancreas, A., III,

468.

Ayres, A., mineral composition of [sugar] cane, B., 480.

Ayres, E., and Gulf Oil Corp., stabilised motor fuels, (P.), B., 1163.

Hill, M. L., and Gulf Refining Co., stabilising gum-forming petroleum products,

(P.), B., 201.

Ayres, F. D. See Gucker, F. T., jun.

Ayres, G. B. See Lee, M., and Tobie,

Aysslinger, H., welding high-tensile boiler steels, B., 920.

Ayyangar, G. N. R., and Beddy, T. V. chlorophyll deficiencies in sorghum; xantha and patchy albino, A., III, 331.

Ayyar, V. R., and Tirumalachari, N. C., age of leaf and its nitrogen content in Cambodia cotton, B., 600.

Azadian, A., and Attia, A. B., correlation of constants of butter fat, B., 804.

Azarov, K., and Kemmer, N., comparative test for acid-resistance of enamel-ware, B., 1205.

Azérad, E. See Baudouin, A.

Azodal Co., Inc. See Maximoff, A. T. Azuma, Y., resistance of hæmoglobin. Physicochemical. II. Chemical. Experiments with animals, A., III, 110.

Azzarello, E., fireproofing of wood, B., 40. Accardo, A., and Abramo, F., determination of nickel [in alloys] as nickel dimethylglyoxime, B., 353.

Azzoni, O., making of coloured photographs and apparatus therefor, (P.), B.,

B.

Ba Thi, M., Strang, L. C., Hunter, T. G., and Nash, A. W., principles of solvent dewaxing, B., 642.

Baader, A., present and desirable future German specifications for evaluation of transformer oils, B., 207.

Baader, E. W., carbon monoxide goitre,

A., III, 342.

Baalsrud, K., and Friis, K., fifty years' experience of concrete in Norwegian dams, B., 785.

Baan, S. van der. See Backer, H. J.

Baars, B., and Ornstein, L. S., etching of copper by ferric chloride solutions, B., 452.

Baars, J. K. See Veen, A. G. van.

Baas-Becking, L. G. M., Karstens, W. K. H., and Kanner, M., salt effect and medium in Artemia salina, L.; antagonism, A., III, 133.

Babaev, M. V., determination of silicon in ferrosilicon from specific-weight measurements, B., 1216.

Babaeva, A. V., equilibria in the system NaClO3-NaSO4 H2O, A., I, 30. Oxidation of non-electrolytic cis-bivalent platinum compounds with sulphuric acid, A., I, 374.

and Daniluschkina, E. I., equilibria in the system NiSO₄-H₂SO₄-H₂O, A., I., 363. See also Tscherniaev, I. I.

Babarczy, J. See Arany, S. A. Babcock, D. E. See Wells, J. E.

Babcock, G. S. See Eastman Kodak Co.,

and Kodak, Ltd.

Babcock, H. D., internuclear distance in oxygen molecules, A., I, 435.

Babcock, S. H., jun., and Fuson, R. C., rearrangement of 5-benzoyl-I-phenyl- Δ^{1} -cyclopentene oxide, A., II, 24.

and Jukes, T. H., beneficial effect of non-saponifiable fraction of soyabean oil on chicks fed a simplified diet, A., III, 420.

Babcock, W. G., maintenance of adequate

nitrogen for citrus [trees], B., 480.

Babcock & Wilcox Co., moulding sand, (P.), B., 441. Refractory articles, (P.), B., 783. [Pulverised-fuel] furnaces, (P.), B., 1287.

See also Kohler, A. M., Norton, C. L., jun., Rummel, J. K., and Wagner, C. L.

Babcock & Wilcox, Ltd., and Heller, L. W., pulverisers, (P.), B., 992.

and Luby, E. L., evaporators, (P.), B., 634.

Babenko, E. M. See Veiselberg, K. B.

Babenko, G. M. See Kuznetzov, V. D.

Baber, T. D. H., and Hassé, H. R.,

comparison of wave functions for the normal helium atom, A., I. 278.

Baber, W. G., contribution to electrical resistance of metals from collisions between electrons, A., I, 291.

Babers, F. H., and Woke, P. A., digestive enzymes in the southern army worm, A., III, 310.

Babička, J., and Řídký, A., presence of micro-organisms in Althon leaves, A., III, 316.

Babkin, E. E., vapour tension of mixtures of phosphoric and nitric acids, A., I, 296. Babkin, M. P., use of complex cobalt com-

pounds in qualitative analysis, A., I, 48. and Tschujko, V. T., determination of magnesium by titration of magnesium ammonium phosphate, A., I, 327.

Babko, A. K., determination of silicic acid as pyridine silico-molybdate, A., I, 325. Simplified potentiometric titration, A., I. 332.

Bablik, C., influence of male and female sexual hormone preparations on blood coagulation, A., II, 55.

Bablik, II., diffusion of hydrogen in pickling of sheet iron, B., 560. General consideration of pickling prior to galvanising [of steel], B., 920. Formation of the hot-dipped zinc coating, B., 1348.

Babor, M. See Atanasiu, I. A. Bach, A. N., Alexeeva, E. P., and Dreving, V. P., first identifiable products of anaërobic catalytic decomposition of sugars, A., II, 177.

Bach, D., automatic pipette, A., I, 635.
Destruction of dehydrogeneses of Staphylococcus aureus by heat; protective action of the substrate, A., III, 179. Study of dehydrogenation by washed [resting] bacteria by a modification of the methods of Thunberg and Quastel and of Braun and Wörderhoff, A., III, 318.

See also Fournier, J.

Bach, S. J., and Holmes, E. G., effect of insulin on carbohydrate formation in

the liver, A., III, 102. Bachaev, I. P. See Kobeko, P. P.

Bacharach, A. L., temporary marking of chemical glassware, A., I, 333. Rachitogenic diets, A., III, 207. Vitamin science, A., III, 323. Anti-rachitic potency of vitamin-D, B., 287

Allchorne, E., and Glynn, H. E., line test assay for vitamin-D., A., III,

See also Anderson, F. W., and Stevenson, S. G.

Bacharach Industrial Instrument Co. See Semrau, H., and Vayda, L. L.

Bachem, C., compressibility of electrolyte solutions, A., I, 27.

Bacher, W., errors in stoneware manufacture, B., 1340.

Bachmair, J., and Kollmann, L., development of light-sensitive material, (P.), B., 1277.

Bachman, C., cestrogenic hormone and mechanism of corpus luteum pro-

duction in the rabbit, A., III, 40. and Toby, G., responses of normal and hypophysectomised rabbits to adrenaline, A., III, 149.

Bachman, C. H. See Fox, G. W.

Bachman, W. S., calcium hypochlorite pellet, (P.), B., 344*.

Bachmann, G., and Haldi, J. [with Wynn, W., and Ensor, C.], respiratory quotient following ingestion of glucose and of fructose as affected by the lactic acid and carbon dioxide changes in the blood, A., III, 464. See also Haldi, J.

Bachmann, W., thermoelectric method for determining [atmospheric] humidity, B.

Bachmann, W. E., synthesis of 1-amino-phenanthrene, A., II, 143. Reaction of alkali metals with polycyclic hydrocarbons: I:2-benzanthrene, 1:2:5:6dibenzanthrene, and methylcholan-threne, A., II, 184.

and Boatner, C. H., phenanthrene derivatives. VI. Preparation of 1., 2-, and 3-halogenophenanthrenes. V. Beckmann rearrangement of oximes of acetyl- and benzoyl-phenanthrenes, A., II, 12, 23.

and Bradbury, J. T., synthesis of 9:10dihydroxy-5-phenyl-9:10-dialkyl-9:10. dihydro-I:2-benzanthracenes and related compounds, A., II, 497.

Cook, J. W., Dansi, A., De Worms, C. G. M., Haslewood, G. A. D., Hewett, C. L., and Robinson, A. M., production of cancer by pure hydrocarbons. IV., A., III, 379. and Wiselogle, F. Y., relative stability

of penta-arylethanes. III. Reversible dissociation of penta-arylethanes, A., II, 182,

See also Wieland, H.

Bachmetev, E. F., camera for determination of the identity period in X-ray structure analysis, A., I, 49.

Bachrach, W. H., Bradley, W. B., and Ivy, A. C., effect of adrenaline on glucose excretion in fasted depancreatised dogs. A., III, 277.

Bachromeev, I. R., and Pavlova, L. N., hæmatologic-biochemical changes in blood from neoarsphenamine, A., III, Bachstez, M., and Cavallini, G., biologically active 4-ketohexuronic acids (ascorbic and isoascorbie acids), A., III, 440. South American drugs. III. Chemical composition of boldus. IV. Bixol, a new alcohol from oil of Bixa orellana, B., 619.

Bachtiarova, Z. C. See Artamonov, N. S. Baciu, A. See Tanasescu, I.

Back, E. A., and Cotton, R. T., control of insect pests in stored grain, B., 968.

Back, S. See Clayton, W.

Backeberg, O. G., modified Mariotte flask for the Pregl C-H determination, A., II, 40.

Backer, H. J., cyclic acetals of butane- $\beta\gamma$ diol, A., II, 3.

and Baan, S. van der, reactivity of chlorine in I:I-dioxy-3-chloro-4-methyl-Δ3thiacyclopentene, A., II, 207.

and Evenhuis, N., tetramethylmethaue-tetrasulphonic acid, A., II, 207. Action of alkali disulphides on tetrabromotetramethylmethane, A., II, 259. (tetrathio-Tetrathiolmethylmethane pentaerythritol), a reagent for aldehydes and ketones, A., II, 318.

and Winter, H. J., 2:6-diselena-4-spiroheptane and other sclenacyclobutanes, A., II, 267. 1:2-Diselenacyclopentanes, A., II, 357.

Backhurst, I., X-ray K-fluorescence yield, A., I, 2.

Bacon, H. E. Sec Powell, S. T.

Bacon, R. F., and Judson, W., recovery of sulphur, (P.), B., 1203. and Wilbur, J., recovery of sulphur, (P.),

B., 910. Bacon, R. G. R., and Farmer, E. H., formation of diene hydrocarbons. I. Principles relating to course of reaction in dehydration of unsaturated alcohols; co-formation of aa- and ay-dimethylbutadiene, A., II, 395.

Bacon, R. H., Grisewood, E. N., and Merwe, C. W. van der, β -ray spectrum of

56Mn, A., 1, 594.

Bacon, T. S., inert gas, (P.), B., 1158. Bacq, Z. M., acetylcholine and cholineesterase in invertebrates, A., III, 349. "Amphiporine" and "nemertine": poisons obtained from nemertines, A., III, 350. Physiology and pharmacology of the autonomic nervous system. XXII. Sensitisation of adrenaline by antioxidants. XXIII. Liberation of sympathine by chemical stimulation of the sympathetic ganglia. XXV. Rôle of liver and abdominal viscera in

destruction of adrenaline, A., III, 478. and Brown, G. L., pharmacological experiments on mammalian voluntary muscle, in relation to theory of chemical transmission, A., III, 348.

and Lefebvre, F., physiology and pharmacology of the autonomous nervous system, A., III, 179.

and Nachmansohn, D., choline-esterase in invertebrate muscles, A., III, 353.

Baczewski, A. See Pauli, W. Badadshan, A. B. See Michnevitsch,

Badanova, Z. L., freezing together of coal, and its prevention, B., 309.

Baddar, F. G., and Warren, F. L., synthesis of benzanthrones, A., II, 457.

Badenhuizen, N. P., jun. See Meyer, K. H.Bader, M., nature of the indigosols, B., 1180.

Bader, R. See Franke, A.

Badertscher, A. E., high-kill insect sprays: semi-concentrate sprays and their evaluation, B., 1281.

Badesco, R., cyaniding in gold extraction, B., 925.

Badger, A. E., reducing heat losses from [glass-]furnace parts, B., 670. Fining of soda-lime-magnesia glasses, B., 780. and Corning Glass Works, glass, (P.), B.,

Parmelee, C. W., and Williams, A. E., surface tension of various molten glasses, B., 1338.

See also Parmelee, C. W.

Badger, $C.\ J.$ See Bauer, $F.\ C.$ Badger, $R.\ M.$, spectra of the di-substituted acetylenes and of the mustard oils, A., I, 2Í9.

and Bauer, S. H., absorption spectra of vapours of alcohols and of nitric acid in the region of the O-H harmonic band at λ 9500, A., I, 9. Spectra of methyl cyanide and methyl isocyanide, A., I, 165. Spectrum characteristics of hydrogen bonds, A., I, 344. Infra-red spectrum and internuclear distances of methylacetylene. A., I, 443. Spectroscopic studies of the hydrogen bond. I. A photometric investigation of the association equilibrium in the vapour of acetic acid, A., I, 495.

Badger, W. L., high-temperature heat transfer, B., 1283. Applied hightemperature heat transfer, B., 1283. Heat-transfer coefficients for edensing Dow-therm films, B., 1284. con-

See also Boarts, R. M., Brooks, C. II.,

and Ullock, D. S.

Badinand, A., effect of various metals in form of ionisable or complex salts on activation of hepatic arginase vitamin-C, A., III, 269.

Badoche, M., determination of small quantities of nitrous oxide and of carbon monoxide mixed with oxygen; application to determination of these substances in gaseous combustion products of nitrogenous substances, A., I, 197. Heat of combustion of nitro-derivatives of naphthalene, A., I, 244.

Badollet, M. S., and Johns-Manville Corp., manufacture of coated diatomaccous earth, (P.), B., 1202.

See also Cummins, A. B.

Badum, E., and Leilich, K., quantitative spectral analysis, A., I, 323.

Bachle, O., viscosity of [rubber] Intex and latex mixtures. I., B., 159. Properties of Buna [synthetic rubber] latex, B., 1244.

Baechle, S. N. Sec Wentworth, T. O. Baechler, R. H. See Truax, T. R.

Bäckström, H., and Boström, A., influence of bleaching bath on colour obtained in the indirect sulphide-toning process, B., 189.

and Johansson, R., fogging caused by photographing through an esculin filter, B., 90. Fluorescence in [photographic] light filters, B., 1275.

Bähr, O., chemical composition of raw materials of German fish industry, B., 182.

Baender, F. G., reclaiming used lubricating oil, (P.), B., 324.

Baens, L., and Yenko, F. M., effect of moulds on Philippine tanning liquors. II., B., 951.

See also Yenko, F. M.

Baer, E. See Erlenmeyer, H., and Fischer, H. O. L.

Bär, K., clover-grass management in middle east Germany, B., 1402.

Baer, P. See Bergami, G.

Bär, R., conditions of coherence in [optical] diffraction spectrum produced by stationary ultrasonic waves in liquids, A., I, 174.

Bär, W. See Günther-Schulze, A.

Baerlecken, E., corrosion-resistance metals to hot fatty acids, B., 1867.

Baermann, M., jun., and Dynamit A.-G. vorm A. Nobel & Co., permanent magnets, (P.), B., 249.

Baertich, E. See Abderhalden, E.

Bärtschi, W., reaction of the coronary

artery to acetylcholine, A., III, 477.

Bärwolff, W. See Krohn, H.

Bässler, F. A., pure culture, mixed culture, and yields in cultivation of drug plants, B., 710.

Bässler, K. See Trauth, F.

Baeta Neves, L. M., thermal balance in sugar factories, B., 379.

Baetslé, R., citric acid fermentation, A., III, 98. Detection of neutralised milk, B., 387.

Bätz, K. See Rossmann, E.

Baev, A. A., changes in adenosine triphosphate content of pigeon crythrocytes, A., III, 195.

See also Engelhardt, V. A.

Baev, V. A., preparation of highly dispersed iron, A., I, 259.

Baeyens, J., requirements of agricultural plants for minor and secondary elements, B., 956.

Baz, G. See Esau, A. Bag, A., Egupov, T., and Volokitin, D., hexalin, B., 1018.

Bagchi, K. N., and Rudra, M. N., sugar content of normal urine and its relation to normal blood-sugar, A., III, 298.

Bagchi, P. N. See Chakravarti, D. Bagdasarjantz, G., comparative biochemistry of muscle. III. Phosphagen in molluses and crustacea, A., III, 7.

Bagge, E., calculation of the mean ionic

energy of gases, A., I, 488. Bagniuk, V. S. See Mochnatsch, V. O. Bagnoli, E. See Nuccorini, R.

Bagshawe, B., alloy steel analysis, B.,

Bahlke, W. H., Thiele, E. W., Adams, C. E., and Ginsberg, B., de-asphalting, acidtreating of lubricants with propane, B., 1007.

See also Standard Oil Co. Bahn, A. See Abderhalden, E., and Braun, J. von.

Bahney, J. W. See Scovill Manufg. Co. Bahrs, S., and Engl, J., piezo-electric effect of ammonium chloride crystals at the transition point -30.5°, A., I, 351.

Baier, A., electrically fired ceramic kilns, B., 544.

Baier, H., and Hundt, W., behaviour of cotton-staple fibre unions in different bleaching processes, B., 537.

Baier, L., plant for preparation of metal powder for bronze colours, (P.), B., 935.

Baier, S. See Macnaughtan, D. J. Baier, W. E., and California Fruit Growers

Exchange, food product, (P.), B., 1405.

Bailar, J. C., jun., Barney, A. J., and Miller, Richard Froman, action of alkalis on mixtures of aromatic aldehydes, A., II, 21.

Bailar, J. C., jun., Haslam, J. H., and Jones, E. M., stereochemistry of complex inorganic compounds. III. Reaction of ammonia with l-dichlorodiethylenediaminocobaltic chloride, A., I. 42.

Jonelis, F. G., and Hnffman, E. H., stereochemistry of complex inorganic compounds. II. Reaction of carbonates with dichlorodiethylenediaminocobaltic chloride, A., I, 42.

Bailey, A. J., microchemical filter crucible,

A., I, 635.

Bailey, B. E., nutritive value of marine products. VII. Vitamin-A and -D potency of oils from British Columbia canned salmon, B., 976.

Bailey, B. L. See Ridgway, R. R.

Bailey, C. F., and Petre, A. W., modern cigarette industry, B., 287.
Bailey, C. H. See Bohn, L. J., Cambron,

A., Harris, R. H., Munz, E., Rupp, E., Shellenberger, J. A., and Skovholt, O.

Bailey, C. R., Best, A. P., Gordon, R. R., Hale, J. B., Ingold, C. K., Leckie, A. H., Weldon, L. H. P., and Wilson, Christopher L., s-trideuterobenzene and structure of benzene, A., I, 344.

and Hale, J. B., force constants and molecular structures, A., I, 445.

Hale, J. B., and Thompson, J. W., molecular structure of BF3, A., I, 548. Infra-red absorption spectra of H2S, HDS, and D2S, A., I, 9. Infra red absorption spectra of some polyatomic fluorides, A., I, 281.

Bailey, C. W., gasket paste, (P.), B., 1373.

Bailey, D. P., Beattie, R., Tyler, W. S., jun., and Tide Water Oil Co., dewaxing of mineral oil, (P.), B., 1303.

Bailey, E. D., Nichols, J. B., and Kraemer, E. O., particle size and optical properties of emulsions, A., I, 181.

Bailey, E. G., Cassidy, P. R., Hardgrove, R. M., and Fuller Lehigh Co., pulverising

mill, (P.), B., 1146.

Bailey, I. W., and Kerr, T., visible structure of secondary wall [in dicotyledons]: its significance in physical and chemical investigations of tracheary cells and fibres, A., III, 158.

Bailey, J., scratch-resisting power of glass and its measurement, B., 344. .

See also Sharp, D. E.

Bailey, J. E., Makinson, R. E. B., and Somerville, J. M., behaviour of electrons in bromine, A., I, 437.
Bailey, J. R. See Bratton, A. C., and

Union Oil Co. of California.

Bailey, K., water-soluble derivative of edestin and its significance in the theory of protein denaturation, A., III, 191. Sulphur distribution of proteins, A., III, 374. Composition of the myosins and myogen of skeletal

muscle, A., III, 375.

Hopkins, R. H., and Dolby, D. E., degradation of starch by amylases. IV. Action of malt amylase on a. amylodextrin, A., III, 221.

Bailey, K. C., tritium or triterium?
A., I, 592. Behaviour of cylinders of inflammable gas in a fire: extinguishing flames by coal gas, B., 1155.

and Taylor, G. T., retardation of chemical reactions. VII. Reaction between potassium permanganate and hydrogen peroxide in acid solution, A., I, 418.

Bailey, L. H., ashing of cereal products, B., 385. Testing rye flour, B., 385.

Bailey, R. W. See Price, W. B.

Bailey, V. A., motions of electrons in a gas in presence of variable electric fields and a constant magnetic field, A., I, 209.

Bailey, W. T., taste and odour problems [of water supplies], B., 849.

Bailey Co., W. M., regenerative brickwork, (P.), B., 442.

Bailie, J. C. See Gilman, H.

Baillod, C., coating of aluminium and its alloys, (P.), B., 692.

Bailly, J. See Remlinger, P.

Bain, E. C., Aborn, R. H., and U.S. Steel Corp., treatment of austenitic steel, (P.), B., 931.

and Llewellyn, F. T., low-alloy structural steels, B., 351.

See also Davenport, E. S.

Bain, J. P., and Pollard, C. B., derivatives of piperazine. X. Reactions with unsaturated esters. II., A., II, 469.

Bain, J. W. Sec Jansen, G. V.

Bainbridge, C. G., oxyacetylene welding of

sheet metals, B., 1352.

Bainbridge, K. T., and Jordan, E. B., high dispersion linear scale mass spectrograph with velocity and direction focussing, A., I, 535. Mass-spectrographic determination of mass changes in some carbon transmutations, A., I, 542.

See also Jordan, E. B.

Bair, G. J., constitution of lead oxidesilica glasses. I. Atomic arrangement. II. Correlation of physical properties with atomic arrangement, A., I, 118; B., 240.

Baird, P. K. See Seborg, C. O. Baird, R. J., mercury sulphate, (P.), B., 239.

Baird, W. See Imperial Chem. Industries. Baird Television, Ltd., and Forman, J. R. H., light-sensitive electron-discharge devices, (P.), B., 582.

See also Banfield, A. C., Gilbert, A. H., and Jarrard, W. J.

Bairstow, S. See Binns, V.

Baisch, J., application of electrolysis for production, refining, and separation of metals, B., 1219.

Baissac, L., defecation of the juice of POJ 2878 [sugar] cane, B., 275. Polarisation of Mauritius raw sugars: standard polarimeter, B., 1113.

Baisse, J. See Pien, J.

Baisset, A., Bugnard, L., Lansac, J., and Soula, L., blood-sugar and sugar storage in the departreatised dog, A., III, 195.

Baitschikov, A. G., possibilities of lowering loss of iodine involved in its recovery, and of improving the quality of the product, B., 341.

Bajpai, M. P. See Dubey, V. S.

Bajula, A. G., testing of gold-containing solutions, B., 1069.

Bak, T., effect of concentration of erythrocytes on degree of hæmolysis, A., III, 114.

Bake, L. S. See Du Pont de Nemours & Co., E. I.

Bakelite Building Products Co., Inc., shingle elements, (P.), B., 443. Cementitious materials, (P.), B., 677. See also Harshberger, N. P.

Bakelite Corporation, abrasive articles, (P.), B., 347. Coating compositions [containing rubber], (P.), B., 1376.

See also Bender, H. L., Byck, L. C., and Swan, H.

Bakelite Ges.m.b.H. See Seebach, F. Bakelite, Ltd., varnish composition, (P.), B., 64. Compositions containing synthetic resins, (P.), B., 64. Synthetic resins, (P.), B., 64. Sheet material [for packings or gaskets], (P.), B., 468. Moulded articles, (P.), B., 468. [Phenolaldehyde] resin-fibre products, (P.), B., 470. [Phenol-aldehyde] resin-fibre compositions, (P.), B., 470. Resin emulsions, (P.), B., 471. [Xylenol-aldehyde] oil-soluble resins, (P.), B., 813. Phenol-aldehyde synthetic resins, (P.), B., 1089. Moulding machines for plastic substances, (P.), B., 1090.

Baker, A. A., geology of the Monument Valley-Navajo Mountain region, San

Juan County, Utah, A., I, 482. Baker, A. B. See Clawson, B. J.

Baker, (Miss) A. Z., and Wright, (Miss) M. D., variation in the vitamin- B_1 activity of raw wheat germ, A., III, 232.

Wright, (Miss) M. D., and Drummond, J. C., nutritive value of bread, B., 969.

Baker, C. E., effect of "Freen" in the atmosphere on apples in cold storage, B., 614.

Baker, C. L., sodium metasilicate: properties and new uses, B., 1334.

Baker, D. H. See Marshall, M. J. Baker, E. B., and Boltz, H. A., thermionic emission into dielectric liquids, A., I, 208, 437.

Baker, E. M., plating equipment-materials of construction, B., 247.

Baker, F. See Rinehart, J. F.

Baker, F. E. See Fleming, W. E. Baker, G. W., and Puffeles, M., analytical data on Palestinian olives and olive oil, B., 1233.

Baker, H. C., concentration of [rubber] latex by creaming, B., 1244.

Baker, H. H., dehydrating compositions, (P.), B., 402.

Baker, J. C., and Mize, M. D., mixing doughs in vacuum and in presence of various gases, B., 1398.

Baker, J. L., and Hulton, H. F. E., hydrolysis of potato starch paste by malt amylase at different temperatures, B., 965.

Baker, J. R., Ranson, R. M., and Tynen, J., spermicidal powers of chemical VII. Approved tests, contraceptives. A., III, 349.

Baker, J. W., and Lanfer, (Miss) A. S., condensation of methyl pyruvate with methyl malonate in presence of anhydrous zinc chloride, A., II, 428.

Baker, K. F., and Heald, F. D., effect of cultural and handling practices on resistance of apples to Penicillium expansum, B., 1102.

Baker, M. D. See Scharles, F. H. Baker, P., and Federated Metals Corp.,

metallurgical furnace, (P.), B., 1070. Baker, R. H., and Barkenbus, C., detection of elements in organic compounds, A., II, 222. Whisky-verdigris analysis, B., 1116.

Baker, S., copper in chemical engineering, B., 448.

Baker, S. G., jun. See Du Pont de Nemours & Co., E. I.

Baker, W., chelation. V. Hydroxyacetylhydrindene, A., II, 198.

and Carruthers, G. N., chelation. VI. Hydroxy-derivatives of acetylnaphthalenes, benzonitrile, and carboxylic esters, A., II, 198.

and McGowan, J. C., pinacols derived from o-hydroxyacetophenones, A., II,

Robinson, R., and Simpson, N. M., synthetical experiments in the isoflavone group. VIII. 4. Baptigenin,

A., II, 299. See also Appel, H.

Baker, W. O. See Smyth, C. P.

Baker, Z., glutathione and the Pasteur reaction, A., III, 306.

Baker Castor Oil Co. See Colbeth, I. M. Baker & Co., Inc., stripping [precious-metal] coatings from coated metal articles,

(P.), B., 358. Electrodeposition of ruthenium, (P.), B., 1227.
See also Colby, E. A., Du Pont de Nemours & Co., E. I., and Westinghouse

Electric & Manufg. Co.

Baker Perkins, Ltd. See Gunston, D.

Bakhsh, I., [pharmacological] actions of kurchicine, an alkaloid of Holarrhena antidysenterica, A., III, 93. Pharmacological actions of concssine and isoconessine, A., III, 93.
Bakina, N. G. See Riss, I. G.
Bakken, R. See Gleditsch, E.

Bakker, A., importance of ascorbic acid for metabolism of the lens, A., III, 326.

Bakker, C. J., number of neutrons emitted by a radium-beryllium source, A., I, 489. Bakker, G., thermodynamics of spherical capillary layer of a pure substance, A., I,

17**9**. Bakker, H., yellowing of wood-pulp paper, B., 1037.

Bakonyi, S., acetone-ethyl alcohol fermentation, B., 177.

Bakowski, S., and Stepniewski, L., preparation of acetone from alcohol, using calcium carbonate and iron oxide as catalysts, B., 522.

and Treszczanowicz, E., azeotropic de-hydration of crude alcohol from pressed yeast manufacture, B., 1259.

Treszczanowicz, E., and Dulowski, J., dehydration of alcohol of high acetaldehyde content by an azeotropic method, B., 522.

Baku Oil Institute, synthesis of ethyl alcohol from artificially prepared gases,

Bakuschinskaja, L. N. See Stadnikov, G. L.Bakwin, H., Bodansky, O., and Turner, R., phosphorus components in the blood of normal and rachitic infants, A., III, 302.

Bal, D. V., and Athawale, C. R., effect of manuring and stage of maturity on yield and mineral composition of pasture grass and their bearing on the mineral require-ments of cattle of the Central Provinces, B., 710.

Balada, A., addition of vegetable oils to mineral lubricating oils, B., 1157

Balandin, A. A., and Brussov, J. J., molecular orientation and catalysis; dehydrogenation of cyclohexane catalysed by chromic oxide, A., I, 90.

Eidus, J. T., and Zalogin, N. G., chemical effects of high-frequency electric discharge on a nitrogen-oxygen mixture, A., 1, 38. Chemical reactions between nitrogen and oxygen in a highfrequency discharge, A., I, 38.

Balandin, A. A., Freidlin, L. C., and Vaskevitsch, D. N., kinetics of thermal decomposition of potassium formate, A., II, 272.

and Schujkin, N. I., influence of substituents on the velocity of catalytic

dehydrogenation of cyclohexane derivatives. II., A., II, 283.

Balandina, V., Berezan, K., Dobromislova, A., Dogadkin, B., and Lapuk, M., polymerisation of butadiene in emulsions. Î. and III., B., 1378.

Balanesco, V. I., and Oeriu, S., control of the hepatic function: test for

galactosuria, A., III, 10.

Balarev, D., adsorption of electrolytes on heteropolar surfaces, A., I, 129. Application of the phase rule to crystal

systems, A., I, 565.
and Kolarov, N., inner adsorption in salt crystals. V., A., I, 25. Formation of fog during distillation, A., I, 27. Vapour pressure and size of particles, A., I, 453.

Balbi, G. See Brambilla, M.

Balboni, G., analysis of flesh and entrails of birds and rabbits, A., III, 118.

Balcar, F. R. See Wilkinson, W. Balce, S., interrelations of compressibility, m.p., solubility, valency, and other properties of halides of alkalis and alkaline earths, A., I, 176.

Bald, J. G., F-type potato virus in Australia, A., III, 319. Virus molecules, A., III, 358.

and Briggs, G. E., aggregation of virus particles, A., III, 358.

Baldacci, E., disinfection of Ricinus seeds, B., 1103.

Baldacci, U., comparison of therapeutic calcium salts. I. Minimum lethal dose by intravenous route of calcium chloride, lactate, gluconate, and pyruvate, A., III, 63.

Baldanza, C. See Stolfi, G. Baldanzi, T. See Agostini, P.

Baldeschwieler, E. L. See Lewis, J. B. Baldinger, L. H., hydrolysis of menthyl acetate and acetylated peppermint oil, B., 729.

See also Bulfer, G.

Baldwin, A. W. See Imperial Chem. Industries.

Baldwin, B. G. See Burk, R. E. Baldwin, C. C., [dry] separator [for placer sand], (P.), B., 741.

Baldwin, D. M. See Krueger, A. P. Baldwin, E., and Needham, D. M., comparative biochemistry of muscular and

electrical tissues, A., III, 222.

Baldwin, F. B. See Doan, F. J. Baldwin, W. C. G., rotatory dispersion of organic compounds; first oxidation product of ascorbic acid, A., I, 115.

See also Lowry, T. M., and Mecke, R. Baleev, A. V., and Schrajbman, S. S., corrosion of plant in the production of potassium chlorate and sodium chlorate, B., 1335.

See also Schrajbman, S. S.

Balestrieri, F. See Carlinfanti, E. Balfe, N. P., currying [of vegetable-tanned leather]. V. Factors which affect the rate of hydrolysis of grease in leather, B., 69.

Ballan, A. Sec Nasini, A. G.

Baliasni, S. S., electro-osmotic purification of water, B., 398.

Balicki, S. See Brupkowski, A.

Balinkin, I. A., and Wells, D. A., spectrum of rubidium in the mercury arc, A., I, 272.

Bálint, P. See Gróh, J.
Baliuk, S. T., recovery of 8-hydroxyquinoline, A., I, 323.

Balkaschin, B. See Andreev, S.

Ball, E. G., oxidation-reduction. XXIII. Ascorbic acid, A., I, 246. Oxidation-reduction potentials of hydroxynaphthaquinones in alkaline solutions, A., I,

Ball, E. L., percussion ore mill, (P.), B.,

Ball, G. L., jun. See Long, J. S. Ball, H. A., Samuels, L. T., and Schott, II. F., effect of cortical extract on glucose tolerance of adrenalectomised and hypophysectomised rats, A., III, 184.

See also Samuels, L. T.

Ball, N. G. See Atkins, W. R. G. Ball, T. R., antimony electrode in $p_{\rm H}$ measurements, A., I, 582.

Ball, W. L. See Allen, C. F. H.
Ball, W. S., Crafts, A. S., Madson, B. A., and Robbins, W. W., weed control, B.,

Ball Bros. Co., and Ludington, L. L., pressure vessels such as pressure cookers, (P.), B., 301.

Ballard, E. See Dyer, E. Ballard, J. L., Jenkins, R. L., and Swann Res., nitration of diphenyl, (P.), B., 327. Ballard, J. W., and Hutchisson, E., nature of the barrier layer in the cuprous

oxide photo-voltaic cell. II., A., I, 498.

Ballard, L. A. T., and Petrle, A. H. K., [with Cornish, E. A.], physiological ontogeny in plants and its relation to nutrition. I. Effect of nitrogen supply on growth of the plant and its parts, B., 70.

Ballard, W. E. See Metallisation, Ltd. Ballauf, A. Sec Wieland, H.

Ballay, J., aluminium in steel metallurgy,

B., 561. Ballay, M., constitution and structural hardening of austenites containing

beryllium and carbon, B., 143. French nickel-plating practice, B., 452. See also Guillet, L.

Ballotta, F., toxicology of formic acid, A., 111, 29.

Ballou, F. H., stationary equipment for orchard spraying and the manufacture of home-made liquid lime-sulphur, B., 825.

Balls, A. K., and Hale, W. S., activity of proteinases in flour, A., III, 97. and Swenson, T. L., alteration of egg

white, (P.), B., 1405.

Balsam, N., chemical and energy meta-

bolism during development of insects. II. Ratio of heat production to respiratory processes during postembryonic development (Lymanthria dispar, L., and Bombyz mori, L.), A., III, 208. Balsamelli, F., chaulmoogra oil and mor-

phological modifications of Mycobacterium tuberculosis, A., III, 398.

Baltaceann, G., and Vasiliu, C., relation between the rate of flow of the bile and the urine during starvation, A., III, 10. Rôle of the bile in growth, A., III, 88.

Vasiliu, C., and Budeanu, T., variations in bile-sugar in hyperglycæmia, A., III, 10.

Baltaccanu, G., Vasiliu, C., and Novae, A., absorption of adrenaline and nicotine by the pericardium, A., III, 27. Absorption of digitalin and ouabain by the pericardium, A., III, 28.

Balteanu, I. See Slatineanu, A. Baltes, J. See Kaufmann, H. P.

Baltimore Club, heat-bodied [linseed] oils, B., 151.

Baly, E. C. C., adsorption of gases and the equation of the liquid state, A., 1, 457. Balyeat, R. M., Seyler, E., and Outhier, V., iodised oil; method of preparation, B.,

Balyi, K., behaviour of thermal current in galena crystals on one-sided pressure, A., I, 173.

Balz, G., determination of nickel in steel containing cobalt and copper, B., 564.

Bamag-Meguin Akt.-Ges., absorption in highly concentrated nitric acid of nitrous gases formed by combustion of ammonia, (P.), B., 134. Pneumatic separation of coal and other granular materials, (P.), B., 993.

Bamann, E., and Feichtner, C., asymmetric hydrolysis of esters by enzymes. X. Configuration specificity of componentesterase; natural synthesis and artificial synthesis by enzymes. XII. Stereochemical specificity of human pancreas-lipase, A., III, 32, 67. Kinetics of ester hydrolysis by enzymes. VII. Autocatalytic increase in rate of ester hydrolysis by pancreatic lipase, A., Ill, 96.

Feichtner, C., and Salzer, W., asymmetric hydrolysis of esters by enzymes. XI. Simultaneous action of human pancreas-lipase and liver-esterase on a racemic ester, A., Ill, 67.

and Gall, H., detection and characterisation of isodynamic pyrophosphatases, A., III, 482.

and Salzer, W., plant phosphatases. I. Phosphatase of Aspergillus oryzæ, a mixture of isodynamic phosphoesterases. II. Activation of takaphosphoesterase by substances of similar constitution, A., III, 32, 70. Animal phosphatases. VII. Activation of phosphatases by magnesium, A., III, 313.

Bambach, K., and Rider, T. II., determination of alcohol in pharmaceutical liquids. II., B., 285.

Bamford, C. H. See Norrish, R. G. W. Bamji, C. N. See Meldrum, A. N.

Banchetti, A., Reformatsky reaction with

benzamide, A., II, 498. Bancroft, F. E., and Metropolitan-Vickers Electrical Co., vacuum distillation appar-

atus, (P.), B., 198.

Bancroft, F. W. See Chargaff, E.

Bancroft, G. H., intensity variation of L series X-ray lines with tube voltage,

and Kinsey, V. E., effect of X-rays on metabolism of tumour tissue, A., III,

Bancroft, W. D., anode reactions, A., I, 193.

and Magoffin, J. E., energy levels in electrochemistry. II., A., I, 32. Energy hump in chemistry. I. and II., A., I, 567, 618.

and Miller, P. A., cold vulcanisation of

rubber, B., 372. and Porter, J. D., Kelvin single potential differences, A., I, 187.

Bancroft & Sons Co., J. See Gibbons,

Band, W., thermomagnetic properties of nickel wire. III., A., I, 121

Bandel, G. See Houdremont, E. Banderet, A. Sec Perret, A.

Bando, K. See Kondo, K. Bandow, F., spectra of adsorbed porphyrin, A., I, 61.

See also Jenke, M.

Banerjea, G. B., and Mishra, B., Raman displacements in absorption and fluorescence bands of solutions, A., I, 549.

Banerjee, H. N., chemical examination of Clerodendron infortunatum. I., A., III, 287. Presence of vitamin-C in certain substances in plants, A., III, 326.

See also Nag, N. C.

Banerjee, K., and Sinha, K. L., structure of aromatic compounds. I. Accnaphth-

ene, A., I, 289.

Banerjee, T., photochemical oxidation of organic substances by hydrogen peroxide in acid media with inorganic sols as photosensitisers, A., I, 370.

Banerji, B. C. See Chakravarti, D.
Banerji, K. C., determination of sucrose
[in mill juice] by double-polarisation methods, B., 1111.

Banerji, S. N., surface tension of colloidal substances, A., I, 410.

 Banfi, R. F. See Goldberg, I.
 Banfield, A. C., and Baird Television, apparatus for photochemical treatment of strip material, (P.), B., 91.

Banfield, T. A., and Myers, R. H., examination of a steel pontoon supporting the landing stage at Gosport, B., 565. See also Hatfield, W. H., and Hudson. J. C.

Bang, O., Beje, O., and Nielsen, M. [with Christensen, E. H., Krogh, A., and Lindhard, J.], physiology of severe muscular work, A., III, 208

Banga, I., significance of fumaric acid in respiration of animal tissues. III. Oxidation of fumaric acid and reduction of oxalacetic acid by muscle pulp, A., III, 59.

and Szent-Györgyi, A., significance of fumaric acid in respiration of animal tissues. IV., A., III, 127.

Bangham, D. H., Gibbs adsorption equation and adsorption on solids, A., I,

and Lewis, F. J., wettability of the cellulose walls of the mesophyll in the leaf, A., III, 365.

Mosallam, S., and Saweris, Z., visible adsorbed films and the spreading of liquid drops at interfaces, A., I, 511.

Banister, R. T. See Simpson, K. M.Bank, O., nucleus and protoplast after vital nuclear staining, A., III, 158.

and Esteřák, K. B., granule-forming cell substances pass through living plasma lemma; observations on epidermis cells of Allium cepa, A., III, 157.

Banks, A., rancidity in fats. I. Effect of

low temperatures, sodium chloride, and fish muscle on oxidation of herring oil, B., 256. Changes in fat of coldstored herring, B., 281, 1263.

and Reay, G. A., cold storage of smoked fish, B., 1263.

Banks, D. B., Barton, P. D., and Sun Oil Co., dewaxing of hydrocarbon oils, (P.), B., 1303.

See also Alco Products.

Banks, F. R., modern high-duty aeroengines and their fuels, B., 407.

Banks, W. H., dipole solvation, A. I, 127. Bannister, F. A., tyrosine in diseased pedipalps, A., 11I, 223. and Hey, M. H., identity of penroseite

and blockite, A., I, 433. See also Brammall, A.

Bannister, W. J., and Commercial Solvents Corp., esterification process, (P.), B., 118.

Bannor, R. E. See Comstock, G. F. Banov, A. V., and Rabotnov, S. N., influence of electrolytes on fluorescence of rhodamine solutions in methyl alcohol, A., I, 168.

Banting, F. G., early work on insulin, A., III, 362. Sec also Fallon, J. F.

Baouman, A., grinding in cement works,

Bapayya, K., effect of temperature on the wing accompanying Rayleigh scattering in liquids, A., I, 345.

Baptista, E., respiration of roots and leaves of the rice plant (Oryza sativa, L.), A., III, 159.

Barabanov, P., dry distillation of old rubber, B., 1377.

Barabanov, V. F. See Fischer, P. Z.

Barac, G., diazo-reaction of ascorbic acid,

A., II, 483. Ultra-violet spectrographic determination of free and conjugated phenols in pure solution and in blood, A., III, 3. Significance of diazo-reaction of blood, A., III, 112. Conjugation of phenol [by tissues], A., III, 132. Conjugation of phenol in the eviscerated, nephrectomised dog, A., III, 469.

Barach, A. L., use of helium as therapeutic gas, A., III, 109. Use of helium in the treatment of asthma and obstructive lesions in the larynx and trachea, A., III, 255.

and Eckman, M., effects of inhalation of helium mixed with oxygen on the mechanics of respiration, A., III, 369.

Barakan, N. B., absorption spectrum of iodine molecules adsorbed on salts, A., I.

Barakov, V., hollow-thread viscose silk, B., 1034. Strong viscose threads, B., 1034.

Baranaev, M., influence of surface layers of insoluble substances on velocity of evaporation of water, A., I, 301

Barannikov, G. I., reaction of diphenylamino with nitrates and nitrites, A., I, 325.

Baranov, P. A., colouring mineral fertilisers, B., 596.

and Kresalov, I. A., properties of ammonium nitrate, B., 339.

Baranova, R. I. See Teraschkevitsch. V. R.

Baranski, V. See Kovalski, V. V.

Barattini, G., sterilisation of tutocaine in aqueous and adrenaline-containing media, B., 497.

Barbaumov, N. J., and Jensch, R. G., influence of supplementary light on crystal photo-effect in cuprous oxide, A., I, 114. Variation with temperature of reverse photo-electric effect in cuprite crystals, A., I, 114. Influence of double illumination on the crystal photo-effect of cuprous oxide, A., I, 114.

Barbella, N. G. See Howe, P. E. Barber, A. See Champion, F. C.

Barber, A. T., and Hurley, T. F., prevention of grit and dust emission, especially from pulverised-fuel furnaces, B., 508,

Barber, C. L., soft solder fluxes, B., 1353. Barber, C. R., sulphur b.p. apparatus with internal electric heating, A., I, 478.

Barber, D. R., portable thermocouple potentiometer, A., I, 635.

Barber, E. G., modification in Blacher method of determining hardness of

water, B., 92. Water analysis, B., 192. Barber, E. M., and Ritchie, A. V., variable vapour-volume barometric type of va-

pour-pressure apparatus, A., I, 50. Barber, F., and Minor, J. E., viscosity of cuprammonium solutions, B., 769.

Barber, G. W., and Dicke, F. F., effectiveness of cultivation as a control for the maize earworm, B., 1254.

Barber, J. H., and Bridge, J. F., testing the

hardness of metals, (P.), B., 935.
Barber Asphalt Co. See Forrest, C. N., and Smith, P. R.

Barber-Colman Co. See Sadtler, C. B. Barbier, D., emission of electrons by the sun and its relation to terrestrial magnetic phenomena, A., I, 3. Emission of electrified particles by the sun and theory of polar auror.e., A., I, 491.

Chalonge, D., and Vassy, E., variations in temperature of atmospheric ozone according to its origin, A., I, 537.

Barbier, G., mineral nutrition of plants as a function of the composition of the substrate, B., 166.

Barbier, H., constitution of the two tert .butyl-p-cymenes, A., II, 55.

and Givaudan-Delawanna, Inc., openchain allylcitrylideneacetone, (P.), B., 1021.

Barbier, P. See Villaret, M.

Barbière, J. See Jullig, (Mlle.) T. Barbieri, C., treatment of hydrocarbon gases, (P.), B., 1302.

Barbot, A., extracting aldehydes and ketones from their hydrogen sulphite compounds, A., III, 5.

Barbour, H. G., and Trace, J., pharmacological action of deuterium oxide. I. Toxicity and symptoms; metabolic rate; water exchanges, A., III, 63. Standard metabolism in the white mouse, A., III, 380.

See also Herrmann, J. B., and Smith. P. K.

Barbulescu, E. See Magheru, G. Barbulescu, N., study of liquids, A., I,

Barcellos, J. See Carranza, F.

Barchewitz, P., absorption spectra of benzene and its derivatives in the near infra-red [6000-9500 A], A., I, 9. Absorption spectra of saturated acyclic alcohols in the very near infra-red [6000-9500 A]; the OH band, A., I, 61. Absorption spectrum of amines in the very near infra-red [6000—9500 A], A., I, 167. Position of CH bands of halogenated derivatives of saturated hydrocarbons, and the electric moment of their molecules, A., I, 218. OH and CH: bands of phenol and its derivatives between 6000 A and 9500 A, A., I, 344.

and Freymann, R., complexity absorption bands in the infra-red for

OH, A., I, 495.

and Naherniac, A., automatic recording spectrograph for near infra-red [6000-9500 A], A., I, 48.

See also Costeanu, G. Barclay, H. See Tiffeneau, M.

Barcroft, J. See Roughton, F. J. W.

Bardeen, J., density of energy levels of heavy nuclei, A., I, 391. Image force

in quantum mechanics, A., I, 546.

Bardenheuer, P., and Keller, E. H., influence on steel of hydrogen absorbed by the melt, B., 790.

Bardet, J., Tchakirian, A., and Lagrange, (Mlle.) R., determination of lithium in sea-water, A., I, 198.

Bardham, J. C., sterol-estrone group. Synthesis of 3-keto-3:4-dihydro-1:2cyclopentenophenanthrene, A., II, 63. and Ganguly, N. C., terpene compounds.

III. Synthesis of isofenchocamphononic acid, A., II, 67.

Bardischev, I. See Krestinski, V. N.

Barducci, I., chemical constitution and

physiological action. II. Linkings in the side-chain, A., III, 479.

Bare, C. O. See Smith, C. E. Bareillier, G. See Fiessinger, N.

Barelare, B., jun. See Richter, C. P. Barer, A. P., and Fowler, W. M., influence of gastric acidity and degree of anæmia on iron retention, A., III, 298. Influence of copper and a liver fraction on retention of iron, A., III, 423.

See also Fowler, $W. \dot{M}$. Barger, G., alkaloids of ergot, A., III, 267.

and Blackie, J. J., alkaloids of Senecio. III. Jacobine, jacodine, and jaconine, A., II, 265.

Robinson, R., and Short, W. F., synthetical experiments relating to carpaine. II., A., II, 310.

Robinson, R., and Smith, L. H., synthetical experiments relating to carpaine. III. Derivatives of tetrahydrofuran and intermediates of the aliphatic series, A., II, 310.

Robinson, R., and Urushibara, Y., synthetical experiments relating to carpaine. I. Synthesis of a basic

long-chain lactone, A., II, 310.

Robinson, R., and Work, T. S., constitution of earpaine. III., A., II, 310.

Bargeton, D. See Rathery, F. Bargteil, S. See Grigoriev, P. N.

Barham, B. S., and Jones, W. D., crystal growth across [metal] interfaces, B., 451. Barichanskaja, F., scattering of light at the surface of separation of two liquids, A., I, 219.

Barigozzi, C., detection of phosphates in ashed tissue, A., III, 167. Mineral substances of chromosomes of salivary glands of Diptera in relation to probable distribution of genetic factors, A., III,

Barillet, F., and Choisnard, (Mlle.) A., change in interfacial tension in the neighbourhood of saturation, A., I, 359. Barischnikova, A. N. See Titov, A. I.

Barkan, G., and Olesk, J., colour values of

acid hæmatin solutions, A., III, 111. and Schales, O., iron. XI. Separation of blood-catalase from "readily eliminated "iron. XII. Hæmoglobin and "readily eliminated" iron in adsorption and cataphoresis. XIII. State of combination and physiological significance of "easily eliminated" iron, A., III, 4, 370. Water-soluble hæmm-C from blood, A., III, 163.

Barkas, W. W., wood-water relationships. III. Molecular sorption of water by Sitka spruce wood, B., 786. Barkenbus, C. See Baker, R. H.

Barker, H. A., biochemistry of methane fermentation, A., III, 273. Methane-

producing bacteria, A., III, 273.

Barker, J., influence of temperature on sucrose: hexose and fructose: glucose relations in potatoes, A., III, 442. Influence of carbon dioxide and oxygen in the atmosphere on sugar content and sprouting of potatoes, B., 282. Effect of temperature of storage on sprouting of potatoes, B., 1263.

Barker, J. W. See Bennet-Clark, T. A. Barker, L. M. See Fowler, M. G. Barker, M. E., and Semmes & Semmes,

accelerating ageing of distilled alcoholic spirits, (P.), B., 1118.

Barker, S. B., Chambers, W. H., and

Dann, M., carbohydrate metabolism in the departreatised dog, A., III, 174.

Barker, S. G. See Norman, A. G., and

Rodwell, A. G.
Barker, W. F., chemical problems in the leather industry, B., 1247.

Barker, W. H., apparatus for use in separation of dirt from coal, and for other similar purposes, (P.), B., 303. See also **Dobriner**, K.

Barkley, J. F., and Burdick, L. R., curves for classification of coal, B., 636.

Barković, D., detection of cotarnine in cotarnine chloride and other pharmaceutical preparations, B., 86.

Barkworth, \bar{E} . D. P., and Sugden, S., variable magnetic moments of cobaltous compounds, A., I, 229.

Barkworth, H., and Cole, L. W. L., acidosis and off-flavoured milk, A., III, 417.

Barle, K. See Gorbach, G.

Barmaschenko, I. B. Sec Plotnikov, V. A. Barmore, M. A., chemistry of storage and preparation of foods, B., 181.

Barnaba, M. See Lucente, G. Barnard, A. E., Messer, W. E., and U.S.

Rubber Co., mixtures of natural rubber latex and aqueous dispersions of reclaimed rubber, (P.), B., 815.

Barnard, C. See Thomas, J. E.
Barnard, J. E., photomicrography with
ultra-violet light, B., 622.
and Welch, F. V., fluorescence micro-

scopy with high powers, A., I, 201. Microscopy with ultra-violet light, A., I, 201.

Barnard, R. D., effect of hydrogen peroxide on methæmoglobin, A., III, 411. Reactions of nitrite with hamoglobin derivatives, A., III, 411.

Barnbeck, H. See Lettré, H.

Barnell, H. R., seasonal changes in carbo-

hydrates of the wheat plant, A., III, 47. Plant respiration. VII. Aërobic respiration in barley seedlings: relation to growth and carbohydrate supply, A., III, 409.

Barnes, B. O., Kanter, A. E., and Klawans, A. H., bitterling ovipositor lengthening produced by adrenal extracts, A., III, 38. Barnes, P. S., glass-lined steel equipment,

B., 919. Barnes, R. B., and Bonner, L. G., filters for the infra-red, A., 1, 331. Optical

properties of lithium fluoride crystals in the near infra-red, A., I, 548.

Bonner, L. G., and Condon, E. U., vibration spectra and molecular structure. I. General; spectrum of the OH group, A., I, 62.

See also Benedict, W. S., and Bonner,

Barnes, R. H., [micro-]determination of blood-ketones, A., III, 291.

and Drury, D. R., utilisation of ketones by the tissues in ketosis, A., III, 306. See also McKay, E. M.

Barnes, R. J. See Stephen, R. A.
Barnes, S. W., Du Bridge, L. A., Wiig,
E. O., Buck, J. H., and Strain, C. V., proton-induced radioactivity in heavy nuclei, A., I, 340.

See also Du Bridge, L. A.

Barnes, W. C., effects of some environmental factors on growth and colour of carrots, B., 72.

Barnes, \hat{W} . \hat{H} ., diagrams of Chinese alchemical apparatus, A., I, 51. Diffraction of X-rays by old specimens of "frozen" rubber, A., I, 351.

Barnett, B. See Hillman, E. S. Barnett, C. E., effect of pigment particle size on physical properties of rubber compounds, B., 371.

See also Gamble, D. L.

Barnett, C. W., Jones, R. B., and Knlchar, G. V., measurement of reagin in non-syphilitic sera, A., III, 59. See also Hanzlik, P. J.

Barnett, E. W., [beer] filter [for bung of casks], (P.), B., 384.

Barnett, H. M., Frohring, W. O., Germann, A. F. O., and S.M.A. Corp., extraction of carotene [from oils and fats], (P.), B., 465.

Barnett, L. E., chemical treatment of hydatid disease, A., III, 14.
Barnette, R. M. See Stokes, W. E.

Barney, A. J. See Bailar, J. C., jun.
Barnhart, A. C. See Sloman, H. J.

Barnicoat, C. R., diacetyl in cold-stored butters. II., B., 490. Effect of metallic contaminants on Cheddar cheese, B., 491. Properties of annatto as a cheese colour, B., 491.

Barnie, D. A., air-washing device, (P.), B., 100.

Barnothy, J., and Forro, M., sidereal time periodicity of cosmic rays and its phase shift, A., I, 439.

Barnum, G. L. See Roe, J. R.

Baron, C., desulphurising Irak crude petroleum with finely-divided copper, B., 749.

Baron, H. L. See Cladite, Inc.

Baron, J., and Laffitte, P., influence of nitrogen on inflammation of diethyl ether, A., I, 247. Influence of inert gases on inflammation of diethyl ether, A., I, 466. Inflammation of acetaldehyde, A., I, 522.

Baroni, A., thioeyanogen chlorides, A., I, 147. Electron diffraction study of graphitisation of industrial lamp-blacks. A., 1, 402. Non-existence of bismuthous bromide BiBr₂, A., I, 527. Oxidisability and structure of industrial carbon black. B., 312.

Baroni, E., vitamins in ophthalmology, A., III, 280.

Baroni, G. See Colombo, G. Barott, H. G., effect of temperature, humidity, and other factors on hatch of hen's eggs and on energy meta-bolism of chick embryos, A., III, 380.

Byerly, T. C., and Pringle, E. M., energy and gaseous metabolism of normal and deutectomised checks between ten and a hundred hours of age, A., III, 16. See also Pringle, E. M.

Barozzi, G. E., drying apparatus, (P.), B.,

Barr, C. G., carbohydrates in the roots of bindweed, B., 1252.

Barr, E. S. See Plyler, E. K.

Barr, F., influence of various kinds of wool on some physical properties of flannel, B., 1319.

and Edgar, R., formaldehyde as a protective agent for wool, B., 662.

Barr, J., intravenous manganese in treatment of psoriasis, A., III, 419.

Barr, K., and Haycock, G. W., treatment

of peat for medicinal purposes, (P.), B., 642.

Barraud, (Mlle.) M., determination of resin in bituminous road materials, B.,

Barreau, P. A., plant for concentration of salt water, (P.), B., 342. Plant for treating salt water, (P.), B., 542.

Barrenscheen, H. K., and Jachimowicz, T.,

constitution of adenosinetriphosphoric acid. II., A., II. 481.

See also Dworaczek, E.

Barrer, R. M., analysis by adsorption of surface structure of graphite, A., I, 561. Nature of diffusion process in rubber, B., 1091.

Barrera, A. V., effects of certain fertilisers and soil-amendment treatments on total nitrogen of Nanhaya clay, a local rice soil, B., 708.

Barrett, C. S., X-ray diffraction equipments and methods, A., 1, 378. Superlattices, A., I, 559. Distortion of [metal] grains by fatigue and static stressing, B., 573. Stereographic projection, B., 1218.

Ansel, G., and Mehl, R. F., preferred orientations in iron-silicon alloys, B.,

and Gensamer, M., stress analysis by X-ray diffraction, B., 247.

Barrett, H. J. See Du Pont de Nemours & Co., E. I.

Barrett, J. F., intermittent tube-inverter, A., I, 481. Effect of ascorbic acid on chemical tests for blood, A., III, 55.

Barrett, L. R., rehydration of fired brick clays, B., 671.

Barrett, M., unusual type of scumming on buff brick, B., 138.

Barrett, P. A., Dent, C. E., and Linstead, R. P., phthalocyanines. VII. Phthaloeyanine as a co-ordinating group; metallic derivatives, A., II, 78.

Barrett Co., and Bywater, W. M., distillation of tar, (P.), B., 1010.

and Cole, P. J., pickling compound, (P.), B., 692.

and Drewsen, P., [roofing] felt, (P.), B.,

and Eckert, C. R., protection of underground metallic surfaces [e.g., pipes], (P.), B., 1226.

and Ellms, E. H., pitch product, (P.), B., 209. Extraction of tar acids, (P.), B., 1160.

and Gallaher, A. H., process and coke oven for coking hydrocarbon material, (P.), B., 111.

and Gould, D. F., rubber-paracoumarone resin composition, (P.), B., 1374. and Harshberger, N. P., cement-cork

[roofing] shingle, (P.), B., 677. and Harvey, E. W., fertilisers, (P.), B.

715. A mixture of oxygen and ammonia gases, (P.), B., 778. Harvey, E. W., and Beekhuis, H. A., jun.,

fertiliser material [ammoniated superphosphate], (P.), B., 827.

Barrett Co., MacCubbin, A. A., and Zavertnik, J., distillation of tar, (P.), B., 113.

and Miller, S. P., blended pitch product, (P.), B., 209. Extraction of phenols from phenol-containing liquors, (P.), B., 1010. Recovery of phenols from waste and other liquors, (P.), B., 1010. Apparatus for saturating absorbent articles, (P.), B., 1149. Impregnation of fibrous [electrical] conduits, (P.), B., 1190.

and Radaseh, A. H., distillation of tar, (P.), B., 1010. Purification of anthracene, (P.), B., 1023.

and Smith, D. T., coking of pitch, (P.), B., 872.

Barrie, H. J. See Russell, D. S. Barrie, (Miss) M. M. O., effect on the isolated heart of preservative present in insulin solutions, B.P., A., III, 41. Effect of vitamin-E deficiency on the thyroid, A., III, 283. Relation of vitamin-E to anterior lobe of the pituitary gland, A., III, 406. Vitamin-E deficiency in the suckling rat, A., III, 441. Reticulocytosis in the guinea-pig. I. Use of standard guinea-pigs in assay of ana-hæmin. II. Hæmatopoietic response of "reactive" guinea-pigs to anahæmin and other substances, A., III, 450.

Barrington, E. J. W., proteolytic digestion and problem of pancreas in the am-mococte larva of Lampetra planeri, A.,

111, 32,

Barriol, J. See Donzelot, P. Barris, R. W., and Waller, W. H., tress modification of cresyl-violet technique for staining nerve cells, A., III, 447.

Barritt, N. W., soil fertility in the Sudan

Gezira, B., 1383.

Barron, A. G. See Barron, E. S. G. Barron, E. S. G., basic dissociation constant of a-picoline, A., I, 616. Biological oxidations. IX. Oxidation-reduction potentials of blood-hæmin and its ĥæmochromogens, A., III, 450.

Barron, A. G., and Klemperer, F., biological oxidations. VII. Oxidation of ascorbic acid in biological fluids, A., III, 77.

Munch, R., and Sidwell, A. E., jun., influence of electrolytes on oxygen dissociation of hæmoglobin, A., III,

See also Hall, F. G., Hogness, T. R., and Lyman, C. M.

Barron, H., chewing gum, B., 1127. Barron & Son, Ltd., W. S. See Rowles, A. H.

Barrows, W. M., jun. See Murlin, J. R. Barshy, C. R. See Imperial Chem. Industries.

Barschev, B. See Tschulkov, J.

Barskaja, F. See Biber, V. Barsky, G., Swainson, S. J., and Hedley, N., solution of gold and silver in cyanide solutions, B., 49.

Barsoum, G. L. See Anrep, G. V. Barsutzkaja, S. See Glassmann, B.

Bart, B., rhodium surfaces for metal

reflectors, B., 798.

Barta, L., photometric determination of peroxidase and phonolase, A., III, 480. and Marschek, Z., determination of pyridine in presence of pyridine homologues, A., II, 478. Colorimetric determination of nicotine, B., 1132.

Barta, O., sodium vapour potential and the Gay Lussac reaction, A., I, 565.

Barta, R., utilisation of flue gases of cement ovens, B., 242. Testing resistance of ceramic materials to changes in temperature, B., 346. Fireclay grog for glass refractories, B., 439. Heat evolution of cement during setting, B., 554. Changes in cement during storage, B., 554.

Bartell, F. E., and Miller, N. F., wetting of solids by solutions; wetting of pigments by binary liquid systems, B., 156.

Bartels, H., excitation and emission of limits of the atomic continuous spectra, A., I, 386, 590.

Bartenev, S., Shuravlev, A., and Lozov-skaja, I., iron oxide for increasing adhesiveness of ebonite and metal, B., 1378.

Bártiai, J. See Bodnár, J.

Barth, E. J., Corlew, R. P., and Sinclair Refining Co., lubricating oil, (P.), B., 1306.

Barth, G. See Suhrmann, R.

Barth, T. F. W., crystallographic studies in the vivianite group, A., I, 433. Barth, W. See I. G. Farbenind.

Barthel, A. See Fain, J. M.

Barthel, R. See Scheiber, J. Barthelmess, E., red lead, (P.), B., 264.

Barthen, C. L., and Leonard, C. S., comparison of spectrophotometric and biological assays for vitamin-A, A., III,

Bartholomé, E., and Eucken, E., dependence on temperature of specific heat (C_v) of monatomic liquids, A, I, 123.

and Karweil, J., free rotation of C-C linking in ethane and butadiene, A., Infra-red spectrum and ground vibration bands of diacetylene, butadiene, and vinylacetylene, A., I, 348. Hindrance of inner rotation in ethane, A., I. 495.

Bartholomew, E. T. See Sinclair, W. B. Bartholomew, F. J., and Chem. Construction Corp., sulphur dioxide from [petroleumrefining] acid sludge, (P.), B., 438. Conditioning acid sludge [from hydrocarbon oil refining], (P.), B., 646. Sulphuric acid from high-oil acid sludges, (P.), B., 1162.

Bartholomew, T., treatment of slag, (P.), B., 916.

Bartlett, J. B., Ruble, R. W., and Thomas, R. P., influence of hydrogen peroxide treatments on exchange capacity of Maryland soils, B., 1249.

Bartlett, J. H., jun., neutron-proton interactions, A., I, 391.

Bartlett, P. D., Kuna, M., and Levene, P. A., configurative relationship of a-hydroxy-n-valerie and α-hydroxy-isovaleric acids, A., II, 227. Configurative relationship of a-hydroxy-nhexoic and a hydroxyisohexoic acids, A., II, 227.

and Pöckel, I., pinacol rearrangement of cis- and trans-1:2-dimethylcyclohexane-1:2-diol; relationship of Walden inversion to mechanism of molecular rearrangements, A., II, 288. See also Tarbell, D. S.

Bartlett, S., comparison between blood meal and wheat gluten as supplement to low-protein diet for dairy cows, B., 184.

and Huthnance, S. L., influence of milking machines on milk yield [and composition], B., 185.

Bartlett, W., jun., effects on blood-amylase of variations in thyroid activity, A., III, 439.

Bartlett Hayward Co. See Wagner, F. H. Bartley, M. A. See Robbins, W. J.

Bartoli, A. J., Reed, C. I., and Struck, H. C., nitrogen content of skeletal muscle of the rat in various nutritional states, A., III, 167.
Bartoli, O. See Nuccorini, R.
Bartolini, B., oxidation-reduction potential

of serum and of the dehydroascorbicascorbic acid system, A., III, 452. and Copello, F., effect of ascorbic acid

on sedimentation velocity of ery-

throcytes, A., III, 449.

Barton, P. D. See Alco Products, and Banks, D. B.

Barton, T. H. See Moore, B.

Bartorelli, G., action of some -onium salts on indirect sensitivity to stimulation of rabbit muscle, A., III, 134.

Bartoschevitsch, J. V. See Sokolov, V. I.

Bartosiewicz, S. Z., shortening time required for micro-Kjeldahl determinations in the apparatus of Parnas and Wagner, A., II, 129.

 Bartow, E., progress in sanitation, B., 191.
 Bartram, M. T., and Black, L. A., detection and significance of Escherichia-Aerobacter in milk. III. Total bacterial count and presence of coli-aerogenes group, B., 489. Detection and significance of the coliform group in milk. I. Comparison of media for use in isolation. II. Identification of species isolated, B., 612, 722.

Bartram, T. W., and Monsanto Chem. Co., stabilisation of mineral oil compositions, (P.), B., 520. Motor fuel composition, (P.), B., 1163. Treatment of motor fuel [with gum inhibitors], (P.), B., 1305.

Bartrum, J. A., spilitic rocks in New Zealand

[Great King Island], A., I, 102.

Bartsch, O., testing of [glass-]tank blocks,
B., 439. Report from Committee II of the D.G.G. on refractory materials for glass-furnace regenerators, B., 439.

Bartschat, F., microscopical examination of mixed feeding-stuffs after screening and treatment with chloroform, B., 975.

Bartstra, E. A. C., refractometric determination of fat in cleaginous materials, B., 1078.

Bartz, J. P., and Schmitt, F. O., carotene and associated pigments in medullated nerve, A., Ill, 280.

Baruischanskaja-Landsberg, F. S. Achmatov, A. S.

Barve, P. M. See Joshi, C. B., and Khanolkar, R. R., and Mankodi, G. F. Barwick, H., and Schütze, W., enrichment of the light argon isotopes by diffusion, A., I, 338.

Bary, \hat{P} ., and Herbert, J., transformation points of glasses, B., 911. Basak, M. N. See Basn, K. P.

Baschkirov, A. N., and Kostel-Janskaja, S. G., determination of carbon in products of low-temperature carbonisation, B., 104.

and Kraeva, L. P., phenols from primary tar. III., B., 106.

and Ugrjumov, M. V., extraction and purification of paraffin from tar of the Achinsk sapropelites, B., 106.

Ziliberg, G. A., and Pavlinov, A. A., analysing solid fuels, B., 101. Baschkirova, E. I. See Bogdanov, I. F.

Baschmatschnikov, I. E., and Sokolov, J. G., Tschernoretschenski Portland cement plant, B., 783.

Baschwitz, (Mlle.) A., absorption method for determining limit of the continuous β -spectrum of radium-E., A., I, 274.

Basford, F. R., derivatives of 4-cyclo-hexyldiphenyl. I.—III., A., II, 22, 55, 410.

Bashenov, N. M. See Smirnov, L. V.
Bashford, L. A., Briscoe, H. V. A., and
Jevons, W., ultra-violet systems of the emitters GeCl and GeBr [and SiBr], A., I, 7.

See also Jevons, W.

Bashour, J. T., and Bauman, L., quantitative precipitation of cholesterol digitonide in presence of bile salts, A., III, 162. Solubility of cholesterol in bile-salt solutions, A., III, 455.

See also Cortese, F. Bashulin, P., influence of temperature on the absorption of ultrasonic waves in benzene and carbon tetrachloride, A.,

Basile, A., and Alfano, F., regressive lipidosis. IV. Lipidosis due to diphtheria toxin in relation to body-temperature. V. Hepatic lipidosis due to diphtheria toxin after preventive treatment with colloidal silver, A., III, 372. Basilevskaia, L. See Halapine, I. K.

Basinger, A. J., and Boyce, A. M., orange-

worm control, B., 378.

Basir, M. A., and Ramabhadran, T. S., human parotid saliva, A., III, 341.

Baskay-Toth, B. See Kuthy, A. von. Baskln, C. M. See Standard Oil Development Co.

Baslavskaja, S. S., influence of the chloride ion on carbohydrate content of potato leaves, A., III, 237.

Bass, E. L., fuels for aircraft engines, B., 407.

Bass, H., and N. V. Molybdenum Co., manufacture of bearings (and stuffing boxes] from powdered metals and metalloids, (P.), B., 1361. Bass, R. M. See Kantor, M. I.

Bass, S. L., and Kauppi, T. A., evaluation of ethylcellulose by load-elongation curves; plasticisers, B., 893.

See also Dow Chem. Co., and Kauppi, T. A.

Bassa, B., tunnel kiln, B., 1337.

Bassani, B., and Ferrante, A., toxicity of ammonium ions, A., III, 392.

Basse, W. See Schmitt, F.

Basset, J., thermal exchange in nitrogen and hydrogen at ultra-pressures up to 6000 kg. per sq. cm., B., 299.

Machebœuf, M. A., and Wollman, E., effect of pressure on pathogenic organisms and their toxins, on viruses, bacteriophages, and malignant tumours, A., III, 101.

Bassett, H., Gordon, H. F., and Henshall, J. H., three-component systems of cobalt chloride and water with calcium, strontium, or thorium chloride, A., I,

Bassett, H. N., bearing metal in the transport industry, B., 145. Paints for watertank interiors, B., 369. Diesel oil, B., 641. Fuels for Diesel engines, B., 751. Cutting lubricants, B., 871.

Bassett, \bar{S} . H. See Keutmann, E. H. Bassett, W. H., jun., materials for cable sheaths, B., 575. Metals used in the development of power cables, B., 1064.

Bassi, U., and Soresina, C., carbon monoxide intoxication: relation to fatigue, A., III, 426.

Bassière, M., structure of cadmium azide.

A., I, 400.

Bastanshian, A. K., and Tiratzujan, S. M., determination of potassium hydroxide, carbonate, and permanganate present together, A., I, 46.

Basterfield, S., Baughen, A. E., and Bergsteinsson, I., isocarbamides and iso-ureides. IV. Condensation of isocarbamides with ketones and ketonic esters, A., II, 76.

Bastian, A., determination of proline in gelatin, A., III, 455.

See also Engeland, R.

Bastien, P., recent progress in magnesium and ultra-light alloys, B., 355. Use of the Thyssen-Bourdouxhe apparatus for corrosion-testing [of metals], B., 1219.

Bastisse, E., magnesium in French soils

and its proportionality with calcium and potassium, B., 596.

See also Demolon, A.
Bastow, S. H., and Whillock, R. H.,

enamel thickness gauge, B., 1339.

Basu, K. P., and Basak, M. N., metabolism of amino-acids in heart- and lung-tissues, A., III, 382. Biochemistry of varieties of Bengal rice. IV. Biological value of proteins of Aman and Aus rice and of their polishings by the balance-sheet and growth methods. V. Extraction and analysis of proteins of Aman and Aus rice, A., 111, 446,

and Chakravarty, S. C., action of B. coli on conjugated bile acids, A., III, 396.

and Mukherjee, S., biochemistry of varieties of Bengal rice. III. Enzymic digestibility of rice starch and protein: action of salivary and pancreatic amylase, pepsin, and trypsin, A., III, 312, 446. Enzymic digestibility of pulses: action of salivary and pancreatic amylase and of the proteolytic enzymes pepsin and trypsin, A., 111, 313.

and Nath, M. C., biological value of the proteins of soya bean, field pea, and Lathurus sativa by the balance-sheet

and growth methods, A., Ill, 382. Nath, M. C., and Ghani, M. O., biological value of proteins of green gram (Phaseolus mungo) and lentil (Lens esculenta). I. Balance sheet method. II. Growth of young rats, A., Ill, 303.

Nath, M. C., Ghani, M. O., and Mukherjee, R., extraction and analysis of the proteins of green gram (Phaseolus mungo), lentil (Lens esculenta), and Lathyrus sativa (Khesari), A., Ill, 446.

Basu, N. C., annual report of the fibre expert to the Government of Bengal,

1933—4, B., 533.

Basu, N. K., vitamin-A and fat metabolism, A., III, 231.

Basu, N. M., actions of ncostibosan, ureastibamine, and histamine on the frog's heart, A., III, 479.

Basu, S., X-ray studies of electrodeposited chromium and gold, B., 1069.

Basu, T. See Datta, R. L.

Basu, U., synthesis of Bz-tetrahydroquin-

olines. III., A., II, 387. Basu, U. P., and Das-Gupta, S. J., acridine derivatives of antimalarials, A., II, 518.

Basu-Mallick, H. See Guha, S. K.

Bataafsche Petroleum Maatschappij, treatment of hydrocarbon oils, (P.), B., 114. Impermeabilising and tightening soils, earthy and stony masses and structures, and filling the voids, cavities, and fissures therein, (P.), B., 172, 244. Alkyl ester salts, (P.), B., 212. Treatment of mixtures containing free acid and acid alkyl esters, (P.), B., 212. Treatment of mixtures containing free sulphuric acid and acid alkyl esters, (P.), B., 212. Extraction of two or more liquid mixtures, (P.), B., 305. Production of olefines by catalytic dehydrogenation of paraffin hydrocarbons, (P.), B., 324. Effecting hydrogenation and dehydrogenation of organic compounds, (P.), B., 325. Motor fuels of high antiknock value, (P.), B., 412. Lubricants, particularly mineral lubricating oils, (P.), B., 521. Alkenes or alkene mixtures in a pure or substantially pure condition, or mixtures thereof, (P.), B., 523. Impermeabilising, tightening, or fixing pervious or loose subsoil layers and other porous masses, (P.), B., 577. Removal of asphaltic substances and paraffin wax from petroleum or petroleum products, (P.), B., 644. Artificial asphalts, (P.), B., 644. Catalytic dehydrogenation of hydrocarbons, (P.), B., 648. Alcohols, (P.), B., 648. [Unsaturated] carbonyl compounds, (P.), B., 649. Extraction of a liquid mixture with aid of a selective solvent, (P.), B., 857. Splitting up a liquid mixture into its components or groups of components, (P.), B., 995. Fractional condensation and distillation of hydrocarbon oils, (P.), B., 1011. Halogenating unsaturated organic compounds by substitution, (P.), B., 1170. Separation of mixtures of substances of high mol. wt. not consisting solely of hydrocarbons [preparation of stand oil], (P.), B., 1173. Oxidation of ammonia with oxygen or gases containing oxygen and contact mass therefor, (P.), B., 1201. Splitting-up mixtures of hydrocarbons of high mol. wt., (P.), B., 1305. Impermeabilising, tightening, or consolidating the ground and other earthy and stony masses, (P.), B., 1346.

and Allen, C. C., valuable products from unsaturated hydrocarbons and mer-

captans, (P.), B., 649.

Beeck, O., Groll, H. P. A., and Bnrgin, J., catalytic dehydrogenation of aliphatic hydrocarbons, (P.), B.,

and Cantter, C. T., carbonyl compounds, (P.), B., 326.

De Simo, M., and McAllister, S. H., saturated and unsaturated carboxylic acids, their salts, and their ketolesters, (P.), B., 21.

Pyzel, D., and Znblin, E. W., olefines, (P.), B., 523.

and Roelfsema, P. J., refining of hydrocarbon oils, (P.), B., 411. Distillation, (P.), B., 634.

Ruys, J. D., and Kittle, R. L., steelpickling inhibitors, (P.), B., 455.

Williams, E. C., and Allen, C. C., valuable products from unsaturated hydrocarbons and hydrogen sulphide, (P.), B., 649.

Bataafsche Petroleum Maatschappii. Yabroff, D. L., and Givens, J. W., treatment of hydrocarbons or derivatives thereof, (P.), B., 1162.

and Yates, W. J., removal of carbon deposits and gums from internal-combustion engines, (P.), B., 1014.

Batalin, V. S., Nikitina, M. K., Rivkin, S. M., and Sekretareva, E. V., prepar-

ation of ethyl acetate from acetaldehyde in the Tischtschenko reaction, A., II, 4.

and Slavina, S. E., aldol condensation of n-butaldehyde, A., II, 177.

Batchelder, E. L., and Overholser, E. L., factors affecting the vitamin-C content of apples, B., 282.

Batchell, G. W., lchr, (P.), B., 1206.

Batchelor, H. W., factors affecting the

value of soil as a source of inoculation for leguminous crops, B., 823.

Bate, J. See Glacier Metal Co.

Bateman, A. J. See Raynor Optical Co. Bateman, L. A., and Fernelius, W. C., demonstration of a negative temperature coefficient of solubility, A., I, 560.

Bateman, L. C., and Hughes, E. D.

mechanism of substitution at a saturated carbon atom. IX. Rôle of solvent in first-order hydrolysis of alkyl halides, A.,

Bates, F., and Phelps, F. P., French sugar scale, B., 75.

Bates, F. D., jun., [laboratory] pebble-mill beating [of wood pulp] under vacuum and pressure, B., 894.

Bates, J. B., and Titanite Alloys Corp., aluminium alloy, (P.), B., 934.

Bates, J. R., electronic energy transfers between iodine and other molecules, A., I, 158. Rate constants of reactions of atoms and radicals as derived from different sources, A., I, 568.

Bates, L. F., and Illsley, P. F., magnetic properties of iron amalgams, A., I, 559. and Tai, L. C., magnetic properties of manganese amalgams, A., I, 356. Bates, M. F. Sec Hummel, F. C.

Bates, P. H., controlling heat of hydration

of cements, B., 1054.

Bates, R. G., and Vosburgh, W. C., normal potential of the mercury-mercurous iodide electrode at 25°, A., I, 465. Activity coefficients of cadmium iodide, A., I, 565. Bates, R. M., aniline printing [of paper],

Bates, R. W., Laanes, T., and Riddle, O., multiple nature of the growth hormone, A., Ill, 76. Bates, V. See Talbot, F. B.

Bateson, R. G., [timber-drying] kiln operation, B., 1056.

Batham, H. N., Sethi, R. L., and Nigam, L. S., molasses as manure in the United Provinces, B., 1101. Bathurst, N. O. See Wilkinson, L.

Batscha, J., and Reznek, S., determination of isopropyl alcohol by immersion refractometer, B., 414.

Batt, W. G. See Tice, L. F.

Batta, G., corrosion problems in the Netherlands, B., 1219.

Battegay, M., and Boehler, P., anthrylthiocarbimides, anthrathiazoles, and thiolanthrathiazoles, A., II, 393.

and Calco Chem. Co., ether hydrochlor-

ides of pseudo-urea, (P.), B., 526. and Mangeney, G., [interaction of] aldehydes and 1-nitro-2-methylanthraquinone, A., II, 25.

Batten, E. T. Sec Skinner, J. J. Battenfield, D. R., and Moore Dry Kiln Co., dry kiln [for lumber], (P.), B., 1346. Battestin, M. See Samec, M.

Battey, S. See Stnart, C. A. Battista, M., behaviour of aqueous sulphate solutions in the infra-red spectrum, A., I, 9.

Battistini, S., and Herlitzka, L., phloridzin diabetes in man. II. Influence of phloridzin on the capillary and venous glyeæmic curve during fasting and after ingestion of glucose, A., III, 13.

Batty, J. W., Burawoy, A., Heilbron, I. M., Jones, W. E., and Lowe, A., synthesis of vitamin-A. III., A., II, 342.

Baubach. See under Bartfai, J. Baud, J. See Reichstein, T.

Baudin, L., air bladder [of fish] and blood equilibrium: variations in volume with pressure, A., III, 83. Variations in blood of the perch under experimental low pressures, A., Ill, 83.

Baudisch, O., use of cupferron in spectral analysis, A., I, 48. Relationship between spatial structure and biocatalytic properties of allotropic iron oxides, A., I, 192. Comparative spectroanalytical investigation of Cryptozoon proliferum and mineral waters of Saratoga Springs, New York, A., III, 34.

and Holmes, S., relationship between spatial structure and biological action of allotropic iron oxides. V. Action of hydrazine hydrate on spectroscopically pure, magnetic iron oxides prepared by different methods, A., I, 192.

See also Brewer, A. K., and Welo, L. A. Baudouin, A., Azérad, E., and Lewin, J., effect of continuous intravenous injections of adrenaline in Addison's disease. A., III, 73.

Baudouy, C. See Fauré-Fremiet, E.

Bandrand, M. See Cournot, J.

Baner, B., and Rnegg, F., dust-extraction plant at Zurich Technical Institute, B., 628.

Bauer, E., and Bernamont, J., expansion of p-azoxyphenetole and nature of the phase change, mesomorphic to isotropic liquid state, A., I, 291.

Magat, M., and Snrdin, M., reduced tem-

perature and general properties of pure

liquids, A., I, 125.

auer, Erwin, pyrophosphatase. II.

Mechanism of activation of phosphatases, A., III, 395.

and Zlegler, F., determination of lactic Bauer,

acid in presence of methylglyoxal, A., II, 273.

Bauer, F., influence of duration of melting on iron oxide content of glasses, B., 545.

Bauer, F. C., Lang, A. L., Badger, C. J., Miller, L. B., Farnham, C. N., and Johnson, P. E., crop yields from Illinois soil experiment fields, B., 170. See also De Turk, E. E.

Baner, G., electrical and optical properties of semi-conductors. XIII. Measurements on cadmium, thallium, and tin oxides, A., I, 600.

Bauer, $G.\ T.$ See Ewing, $D.\ T.$ Baner, H. See Rosenthal, $S.\ M.$

Baner, J., chemical reactions in suspension of surviving adipose tissue in Tyrode solution, A., III, 474.

Bauer, J. C., and Jenkins, G. L., methylenedisulphonic acid and its derivatives, A., Bauer, J. H., Cox, H. R., and Olitsky, P. K., ultrafiltration of the virus of equine encephalomyelitis, A., III, 71.

Bauer, er, K. H., volumetric-analytical methods of the [German] Pharmacopœia, B., 1266.

and Brunner, K., lactucarium. III. Bitter substances of the sap of Lactuca virosa, A., II, 159.

and Gerloff, U., constituents of resins. IX. Resin alcohols of mistletoe, A., II, 28.

and Hildebrandt, H., semi-micro-method for determination of morphine in opium according to D.A.B. VI., B., 840.

and Holle, A., evaluation of white mustard, B., 1268.

and Moll, H., precipitation of resin acids with ammonia from a dry ethereal solution of the resin, B., 943. and Umbach, G., unsaponifiable constituents of shea butter, B., 1077.

Bauer, P. S., and North Shore News Co., [electrical] temperature meter, (P.), B.,

Bauer, R. See Uhl, F. A.

Bauer, S. G., Strangman, L., and Schulman, J. H., emulsification of liquids and apparatus therefor, (P.), B., 99.

Bauer, S. H., extension of the analytic method of analysis of electron diffraction photographs of gases, A., I, 351. Structure of diborane, A., I, 397.

and Pauling, L., structure of penta-borane, B₅H₉, A., I, 119. See also Badger, R. M., and Jenkins, H. O.

Bauer, S. T. See Ralston, A. W. Bauer, W. See Claus, W.

Baughan, E. C., and Bell, R. P., temperature coefficients in the anioncatalysed decomposition of nitramide. A., I, 315.

Baughen, A. E. See Basterfield, S. Bauguess, L. C., influence of optical activity on the utilisation of tryptophan for growth by diphtheria bacillus, A., III, 226.

Baujard, F. See Boutaric, A. Baukloh, W., development of an outer [decarburised] zone on annealing iron-carbon alloys in hydrogen, B., 445. Influence of hydrogen on cast iron, B., 558.

and Sittard, J., mechanism of scaling of iron, B., 678.

and Springorum, F., reduction of nickel and copper oxides with solid carbon. A., I, 196. Hydrogen-permeability of cast iron and its decarburisation by hydrogen, B., 789.

and Ziebeil, O., reduction of the oxides of manganese by solid carbon in a

vacuum, A., I, 577.

Baum, A. H. See Stout, L. E.

Baum, E. See Urion, E.

Baum, G., selection of turbine oils and their care during use, B., 1007.

Baum, L. A. H. See Traxler, R. N. Baum, R. See Ginnings, P. M.

Banman, A. M., vapour pressure of water over fused sodium and potassium hydroxide, A., I, 565.

Banman, L. See Bashonr, J. T., and Rousselot, L. M.

Banman, M., Grabovski, I., Vischne-polskaja, F., and Guschtschin, G., hydration of sunflower oil, B., 586.

and Dvinjaninova, I., oxidised oils as cmulsifying agents, B., 366.

Baumann, C. A. See Stare, F. J.

Baumann, E. See Nagel, Werner. Baumann, E. J., and Metzger, N., iodine content of blood, A., III, 452. See also Levine, M.

Baumann, G., action of typhus-toxin on organ and muscle enzymes, A., III, 96.

Baumann, H. See Freckmann, W. Baumann, Hans, and Conrad, H., comparison of working of motor wagons using town's gas and liquid fuels, B., 9. Baumann, H. N., jun. See Carborundum

Baumann, T., and Rappolt, L., metabolism of vitamin-C, A., III, 154.

Baumann, W., alternating-current investigation of anodically oxidised aluminium, A., I, 11.

See also Funk, H. Baumberger, J. P. See Müller, O. H. Baumgärtel, T., biological synthesis of proteins, A., III, 467. Dried yeast as fodder supplement for milch cows. II., B., 83. Packing of [dried] milk products, B., 387. The fat problem [in Germany], B., 584. Potato spent wash as fodder for milch cows, B., 616. Use of pure bacterial cultures in dairying, B., 970, 1124. Application of pH

measurement in dairying, B., 1124.

Baumgardt, E., absorption of ultrasonic waves in benzene, A., I, 174. Supersonies in chemistry, A., I, 319.

Baumgarten, A. See Gerth, G.

Baumgarten, G. See Mannich, C.

Baumgarten, H. G. See Schiemann, G. Baumgarten, P., and Müller, E., additive

product of boron fluoride and potassium sulphate, A., I, 93.

Bauminger, B., and Lieben, F., com-

bination of sugars with amino-acids in a current of oxygen, A., II, 401. See also Lieben, F.

Baur, E., photolysis of carbonic acid, A., 1, 318. Formaldehyde from percarbonate, A., I, 321. Phosphorescence of zinc sulphide, A., I, 599. Sensitised photolysis of malic acid, A., II, 441. Electrolytic reduction of glycollic acid and lactic acid, A., II, 482. Desensitising of anthraquinone dyes and the bleaching of tissues by light, B., 1325.

[with Chrétien, P. E.], photo-oxidation of carotene, A., II, 54. and Brunner, R., iron oxide cathodes in

the carbon-air cell, B., 1362. and Frieker, H., photochemical formation of formaldehyde from chlorophyll and eosin, A., I, 318.

and Gloor, K., photolytic production of formaldehyde in the eosin group, A., II, 513.

and Preis. H., combustion cells with solid conductors, B., 1362.

Baur, H. See Edlbacher, S.
Baur, K. See Union Carbide & Carbon

Corp. Baur, M., pharmacological modification of

bodily performance in sport, A., Ill, 65. Bauriedel, G. See Hartmann, August.

Bansch, H. See Permien, M. Bausch & Lomb Optical Co. See Forrest,

Banschinger, C., analysis of soaps, B., 1078. Technical soap-making. II. and III. Soap fillers. I. and II., B., 1232.

Bauwen, M., difficulties in the vitamin control of proprietary food preparations, B., 976.

Baver, L. D., Woodruff, C. M., and Lntz, J. F., physical and chemical properties of the Iredell and Davidson soils affecting erosion, B., 1382. Soil porosity as an index of structure, B., 1382.

Bavin, G. D., Powell, M., and Specialty

Sales Corp., dehydration of oil emulsions,

(P.), B., 1304.

Bawden, F. C., and Pirie, N. W., liquid crystalline preparations of cucumber viruses 3 and 4, A., III, 227. Isolation and some properties of liquid crystalline substances from solanaceous plants infected with three strains of tobacco mosaic virus, A., III, 398.

Pirie, N. W., Bernal, J. D., and Fan-kuchen, I., liquid crystalline substances from virus-infected plants, A.,

III, 71.

See also Spooner, E. T. C.

Bawn, C. E. H., and Evans, A. G., reactions of sodium atoms with oxides of nitrogen,

Baxter, A., reflexion and absorption of light by partially transparent films of silver and aluminium, A., I, 555.

and Brentano, J. C. M., effect of discontinuities of the background on the evaluation of the intensities of X-ray reflexions from crystalline powders, A., I, 552.

Baxter, F. S. See Martineaus, Ltd.

Baxter, G. P., and Averill, M. E., leaduranium ratio of Beaverlodge pitchblende, A., I, 384.

Faull, J. H., jun., and Tuemmler, F. D., at. wt. of radiogenic leads, A., I,

and Hale, A. H., at. wt. of carbon. II., A., I, 210.

Hönigschmid, O., and Lebeau, P., seventh report of the At. Wt. Commission of the International Union for Chemistry, A., I, 160.

See also McCoy, H. N.

Baxter, J. P. See Imperial Chem. Indus-

Baxter, S. G., parallel concentration of enzymes in pancreatic juice, A., III, 140.

Bay, Z., Papp, G., and Szepesi, Z., scattering of y-rays, A., I, 388.

Bayard, P., infra-red absorption spectrum and molecular structure of pyruvic acid, A., I, 167.

Bayer, E. See Lock, G.

Bayer, $G_{\cdot \cdot}$, and Wense, $T_{\cdot \cdot}$, influence of histamine on acetylcholine action, A., III, 24. Action of vegetable stimulants on emulsions, A., III, 27.

Bayerische Stickstoff-Werke Akt.-Ges., purification of finely-divided carbon black which has been formed on iron-containing contacts by decomposition of carbon monoxide, (P.), B., 13. Phosphatic fertilisers, (P.), B., 1255. See also Heimann, H.

Bayfield, E. G., viscosity [of flour], B.,

and Shiple, V., soft winter wheat studies. V. Evaluating quality and strength of some varieties, B., 1118.

Bayless, F., and Handovsky, H., antagonism between atropine, acetylcholine, and acetyl-β-methylcholine on the dog's or cat's heart in situ, A., III, 217.

Bayley, D. S., and Crane, H. R., β-ray spectra of ⁸Li and ¹²B, A., I, 593. Bayley, P. L., violet absorbing filters, A.,

I, 634.

Baylis, J. R., filtering materials for rapid sand filters. VI. Mudball formation and measurement, B., 191. Filter-bed troubles and their elimination [in water treatment], B., 985. Experiences in [water] filtration, B., 1139. Silicates as aids to coagulation [of natural waters], B., 1414.

Bayliss, M., effect of constitution of soaps on their germicidal properties, B., 57.

Bayliss, N. S., atomic radii from parachor data and from electron-diffraction data, A., I, 224. Theory of continuous absorption spectrum of bromine, A., I, 271. Spectroscopic analysis, A., I, 423. Continuous absorption spectrum of chlorine and the photo-synthesis of hydrogen chloride, A., I, 525. See also Aickin, R. G.

Bayor, E. H., and Kampf, L., preparation of vehicle films free of supporting found-

ation, B., 261.

Bays, G. S., and Stanolind Oil & Gas Co., apparatus for treatment of petroleum emulsions, (P.), B., 1016.

Bazilevskaja, N. A., breeding for chemical composition, A., III, 189.

Bazille, S. See Fabre, R.
Bazin, E. V. See Rabinovitsch, I. M.
Bazuirin, M., 6:9-diamino-2-ethoxyacridine, A., II, 432.

Bazzocchi, A. See Tootal Broadhurst Lee Co. Bazzoni, C. B., modified Smythe vacuum leak, A., I, 380.

See also Weber, A. H.

Beach, B. A. See Hastings, E. G. Beach, J. R. See Schalm, O. W. Beach, N. F. See Eastman Kodak Co. Beach, N. M. See Gen. Foods Corp. Beacham, T. E. See Stream Line Filter Co. Beacon Milling Co., Inc. See Lee, C. E. Beadle, G. W., Clancy, C. W., and Ephrussi, B., development of eye colours in Drosophila pupal transplants and the influence of body-fluid on vermilion, A., Beadle, L. C., and Booth, F. A., low-

temperature thermostat, A., I, 581. Beadles, J. R. See Mitchell, H. H.

Beal, C. L. See Hansen, M. E.
Beal, G. P. See Boswell, M. C.
Beal, E. S. L., apparatus for measuring viscosity, (P.), B., 307. Table of sp. gr. correction factors for petroleum oils, B., 640. Extended vapour-pressure chart for hydrocarbons and petroleum products, B., 750.

Beale, H. P., relationship of Stanley's crystalline tobacco-mosaic virus material to intracellular inclusions present in virus-infected cells, A., III, 100. Relation of Stanley's crystalline tobacco virus protein to intracellular crystalline deposits, A., III, 319.

Beall, D., isolation of pregnandiol from

human pregnancy urine, A., III, 102. Beall, I. N., natural gas as chemical raw material, B., 108. Chemicals from natural gas, B., 517.

Beall, R., exchange of electrolytes between roots and acid solutions, A., III, 499.

Beamer, C. M. See Archibald, F. M. Beamish, F. E., Russell, J. J., and Seath, J., determination of gold, A., I, 330. and Scott, M., analysis of platinum metals: silver assay bead, B., 1355.

See also Forbes, E. C., Russell, J. J.,

Seath, J., and Thompson, S. O.
Beams, H. W., air turbine centrifuge, A., I,

Beams, J. W., and Linke, F. W., inverted air-driven ultracentrifuge, A., I, 380. Linke, F. W., and Skarstrom, C., tubular

vacuum type centrifuge, A., I, 635. and Snoddy, L. B., electrically driven ultracentrifuge, A., I, 202.

See also Snoddy, L. B.

Bean, E. L. See Horton, P. J., jun.
Beans, H. T., Walden, G. H., jun., and
Hammett, L. P., phonograph record, (P.), B., 157.

Bear, R. S., and Schmitt, F. O., optical properties of the axon sheaths of crustacean nerves, A., III, 456.

Schmitt, F. O., and Young, J. Z., sheath components of giant nerve fibres of the squid, A., III, 375. Ultrastructure of nerve axoplasm, A., III, 375. Protein constituents of nerve axoplasm, A., III, 375.

See also Schmitt, F. O.

Beard, E. E. Seo Du Pont de Nemours & Co., E. I.

Beard, E. H., strontium minerals, B., 795. Beard, H. H., coefficients of correlation between the nitrogenous constituents of the urine after ingestion of low, normal, and high protein diets, A., III, 202.

and Boggess, T. S., comparison of oral administration versus intraperitoneal injection of colloidal iron ou blood regeneration in nutritional anæmia of the rat, A., III, 378.

See also Virtue, R. W.

Beard, J. W., Finkelstein, H., and Wyckoff, R. W. G., p_H stability range of the elementary bodies of vaccinia, A., III,

and Wyckoff, R. W. G., isolation of a homogeneous heavy protein from virus-induced rabbit papillomas, A., III, 206.

See also Wyckoff, R. W. G. Beard, L. C., jun. See Rather, J. B. Beard, R. E. See Standard Oil Co.

Bearden, J. A. See Kanne, W. R., and Roseberry, H.H.

Beardsley, A. P., and Calco Chem. Co., [carrying-out] vapour-phase catalysis, (P.), B., 1144.
Beardsley, W. H., and Sinclair Refining Co.,

refining of South Texas lubricating oil,

(P.), B., 115.

Beasley, J. O. See Beeves, R. G.

Beater, B. E., improved technique in grading of coarse and fine sands during mechanical analysis of soils, B., 269.

Beath, O. A., Gilbert, C. S., and Eppson, H. F., selenium in soils and vegetation associated with rocks of Permian and Triassic age, B., 702. Selenium distribution in, and seasonal variation of type vegetation occurring on, seleniferous soils, B., 1102.

Beattie, J. A., and Kay, W. C., normal b.p. and critical constants of n-heptane,

Kay, W. C., and Kaminsky, J., compressibility of and an equation of state for gaseous propane, A., I, 558. See also Smith, Leighton B.

Beattie, R. See Bailey, D. P.

Beatty, S. A., and Gibbons, N. E., measurement of spoilage in fish, B., 613.

Beatty, W. E., metal separation, (P.), B., 798.

Beau May Process Corporation, production of intensified fruit or vegetable juice preparations, (P.), B., 1405.

Beauchamp, C. E., Lazo, F., and Bonazzi, A., sugar-cane physiology. V. Contents of nitrogen, phosphorus, and potassium in crude chlorophyll and in the leaf skeleton: relation to fertilisers, B., 1389. Beaudine, F. See Carrick, L. L.

Beaulieu Marconnay. See under Marconnav.

Beaumont, A. B., and Holland, E. B. absorption by food plants of elements of importance in human nutrition, B.,

Beaumont, J. H., and Haller, M. H., relative value of several wetting agents in removing lead residues from apples, B., 182.

See also Haller, M. H., and Jones, W. W.

Beauvallet, M., inversion of the effect of one constrictor substance by another, A., III. 176.

Beavens, E. A., Goresline, H. E., and Nelson, E. K., silver in artificial ageing of brandies, B., 967.

Beaver, D. J., and Monsanto Chem. Co., preservation of rubber, (P.), B., 1380. See also Booth, E. W.

Beazell, J. M., Schmidt, C. R., and Ivy, A. C., effectiveness of orally administered diastase in achylia pancreatica in dogs, A., III, 266.

Beazley, W. B. See Coffin, C. C.
Bebb, H. T., and Canton Stamping &
Enameling Co., continuous [mottled]

enamelware manufacture, (P.), B., 672. Bebeschin, K. V., chemical composition of bone in d'Albers-Schönberg disease, A., III, 7.

See also Smorodincev, I. A.

Bebie, J., Doelling, G. L., and Rice-Stix Dry Goods Co., fabric structure and treatment, (P.), B., 1332.

Becchini, G., and Carteni, A., effect of X-irradiation on iodine content of thyroid gland, A., III, 175.

Bechdel, S. I. See Rasmussen, R., and

Shaw, A. O.

Becher, C., jun., purification and regeneration of old oils, B., 517.

Becher, H. L., and Agasote Millboard Co., fire-resistant, porous insulating material, (P.), B., 787.

Bechert, K., simple nuclear model, A., I, 6. Theoretical derivation of the Fermi constant, A., I, 163.

Bechtel, H. E., and Hoppert, C. A., seasonal variation of vitamin-D in milk, B., 833.

Huffman, C. F., Duncan, C. W., and Hoppert, C. A., vitamin-D studies in cattle. IV. Maize silage as a vitamin-

D source, B., 1129.

Bechtereva, M. N., and Jernsalimski, N. D., analysis of mixtures of volatile acids, A., I, 475. Determination of acctone, n-butyl and ethyl alcohol, present together. I. Oxidation method, A., II, 477.

See also Jerusalimski, N. D.

Bechiner, P., Hirschmann, W. B., and Amer. Colloid Sales Division, clays and their preparation, (P.), B., 673.

Beck, A. B., and Gartrell, H. W., effect of lead salts and alkalis in cyanidation [of gold ores], B., 49.

Beck, F., evaporation of plant juices in potato-meal and syrup factories, B., 183. Preparation of [potato] flakes by the Koeniger process, B., 492. Cheaper potato flakes, B., 726.

Beck, F. F., Carr, C. J., and Krantz, J. C., jun., toxicity of certain sugar alcohols and their anhydrides, A., Ill,

See also Dozois, K. P., and Krantz, J. C., jun.

Beck, G., energy and volume changes on chemical reaction, A., I, 464. Amides of nitric, chloric, iodic, and acetic acids, A., I, 473. See also Rosenthaler, L.

Beck, H. See Jores, A.

Beck, H. C. See Seligman, C. G.

Beck, H. H., and Weckel, K. G., film characteristics; effect on response of fluid milk to ultra-violet radiation, B., 80.

Beck, K. (Berlin), antimony compounds as substitute for tin oxide for white enamels, and hygienic examination of

enamels containing antimony, B., 547. Beek, K. (Berlin-Dahlem), and Schormüller, J., colloid-chemical studies on meat proteins, B., 1263.

Beck, K. (Stuttgart). See Fricke, R. Beck, L. V., and Nichols, A. C., action of fluorescent dyes on paramecia as affected by $p_{\rm H}$, A., III, 485.

Beck, P. A., effect of reversed deformation on recrystallisation, A., I, 556.

Beck, W., and Malec, E., velocity of

rusting of steel and iron in oxygenated

water, B., 566.

Beck, W. A., practical device for rapid determination of plant pigments, A., III, 333.

Beck, Koller & Co. (England), Ltd., [phenol-aldehyde] resinous condensation products, (P.), B., 470. [Alkyd]

resinous products, (P.), B., 946. and Hönel, H., artificial [phenolformaldehyde] resinous products, (P.), B., 813.

See also Hönel, H.

Bečka, $J_{\cdot,\cdot}$, factors controlling assimilation of minerals in the animal organism. I. Effect of magnesium compounds on calcium excretion by kidney and intestine, A., III, 21.

Beckacite Kunstharzfabrik Ges.m.b.H., resinous condensation products, (P.), B., 946. Plastic masses [from terpene phenols and aldehydes], (P.), B., 946. [Oil-soluble phenolic] artificial resins, (P.), B., 946.

Becke, F. See Chwala, A.

Beckenbach, J. R. See Wadleigh, C. H., and Young, H. C.

Becker, A., and Kipphan, E., scattering of cathode rays of medium velocity in gases, A., I, 209. See also Schaum, K.

Becker, A. E., and Reed, M. J., history and present status of research and specifications of Diesel fuel, B., 109.

Beeker, C., jun., stove blacking compositions and stove polishes, B., 1368. Becker, D. See Hilpert, R. S.

Becker, Erich, absence of pterins from the excrement of insects which produce them, A., III, 170. Extraction from the meal-moth Ephestia kuhniella of the gene A-hormone producing dark-coloured cyes, A., III, 376.

Becker, Ernst, laminated materials from cellulose and wood, B., 1036.

Becker, Eugene, and Di Gleria, J., potentiometric determination of vitamin-C, A., III, 155. Becker, E. H. See Martus, M. L.

Becker, F. See Englert, O.

Becker, F. K., cleanness of paper, B., 894. Becker, G. See Roth, W. A. Becker, H. See Vollmann, H.

Becker, H. von. See Standinger, H.

Becker, K. See Gen. Electric Co. Becker, M., betaine aurichloride, A., II, 53.

See also Edlbacher, S.

Becker, O., mixing machine, (P.), B., 994. Becker, R., ordered distribution in metallic solid solutions, A., I, 455.

Becker, R. B. See Arnold, P. T. D.

Beeker, S. W. See Obermayer, M. E. Becker, W. See Englert, O. Becker, W., jun., auto paint refinish, (P.),

B., 1090. Becker, Z. E., comparison between action

of carbonic acid and that of other acids on the living cell, A., III, 133.

Beckerich, A., rapid process of agglutination after centrifuging, A., III, 86. Beckert, C. J. See Kritchevsky, W.

Becket, F. M., Franks, R., and Electro Metallurg. Co., laminated metal [steel] stock, (P.), B., 580.

See also Electro Metallurg. Co., and Union Carbide & Carbon Corp.

Beckett, T., and Dyson, G. M., reactions of thiocarbonyl chloride. V. With compounds containing the NH NH, group,

A., II, 411.

Beckley, V. A., geranium oil in Kenya,
B., 1133.

Beckman, A.O. See Welge, H.J.Beckmann, C. O., and Cohen, K., solvent action on optical rotatory power, A., I, 65.

Beckmann, E., Krupp's special [arc] welding process, B., 561.

Beckmann, S. See Komppa, G. Beckwith, E. Q. See Friend, W. Z.

Beckwith, T. D., and Donovick, S. E., increase in alcohol production by irradiated yeast, A., III, 98. and Weaver, C. E., sonic energy as a

lethal agent for yeast and bacteria, A., III, 277,

See also Donovick, S. E.

Beckwith Manufacturing Co. See Lovell,

Becquerel, J., De Haas, W. J., and Handel, J. van den, paramagnetic rotatory power of hydrated dysprosium ethyl sulphate: paramagnetic saturation, A., I. 70. Paramagnetic rotatory power of hydrated ethyl erbium sulphate and paramagnetic saturation, A., I, 351. Paramagnetic rotatory power of hydrated praseodymium ethyl sulphate in the direction of the optic axis, A., I, 452.

Becquerel, P., death resulting from freezing vegetable cells in liquid nitrogen at -190°, A., III, 283.

Becze, G. von, carrying out physical and chemical processes, (P.), B., 1290.
Beddoes, H., Schelnz, H. E., and Pacific

Flush Tank Co., combination sludgedigestion and gas-storage tank, (P.), B., 1140.

Bedel, C., solubility of slightly soluble electrolytes, precipitated in presence of their reaction products; application to silver chloride, A., I, 407.

Bedos, P., and Ruyer, A., stable dibromide of $\Delta^{1:3}$ -cyclohexadiene, A., II, 330.

Beebe, A. H., bright nickel-plating, B.,

Beebe, M. C., and Scovill Manufg. Co., a stencil, (P.), B., 502.

Beebe, R. A., Low, G. W., jun., and Gold-wasser, S., heats of adsorption at -183°; carbon monoxide on copper, A., I, 25.

and Orfield, H. M., heats of adsorption at -183°: hydrogen on chromic

oxide, A., I, 561.

Beeching, R., structure of aluminium, chromium, and copper films evaporated on glass, A., I, 16.

Beeck, O., exchange of energy between organic molecules and solid surfaces. I. Accommodation coefficients and specific heats of hydrocarbon molecules. II. Accommodation coefficients and specific heats of paraffin hydrocarbons and the influence of temperature on the accommodation coefficients (including argon) at some 10⁻⁶ mm. (Hg) pressure, A., I, 21, 294. See also Bataaische Petroleum Maats.

Beek, J., jun., probable error in measure-ment of tensile strength of [vegetabletanned] heavy leather, B., 374.

Beekhuis, H. A., jun. and Lawrence, C. K. See Barrett Co.,

Beenken, C. D., fire protection [in the chemical, paper, etc. industries], B.,

Beeny, H. H. See Herbert, Ltd., A. Beer, B. S., rotation analysis of the $0 \rightarrow 4$, $0 \rightarrow 5$, $1 \rightarrow 4$, and $1 \rightarrow 5$ bands of the III. pos. system of CO, A., I, 547. Beer, L. See Fischer, Hans.

Beers, G. H., ore-crushing mill, (P.), B., 97.

Beerwald, A. See Seith, W. Beese, N. C., focusing of electrons in an X-ray tube, A., I, 501.

Beeson, H. II. Sec Sweeney, O. R. Beeson, K. C., chemical reactions in fertiliser mixtures, B., 955.

and Boss, W. H., chemical reactions in fertiliser mixtures: decomposition of

dolomite, B., 1385.

Beeson, W. M. See Peterson, W. H.

Beets, M. G. J., system pyrogallol-pphenylenediamine, A., I, 517.

Beetz, P. See John, Hanns. Beevers, C. A. Seo Yu, S. H.

Beford, A. J., treatment of leather, (P.),

Begtrup, F. L., determination of rotenone in derris and cube roots, B., 286. Behm, W. von. See Dyckerhoff, H.

Behne, E. R., analysis of final bagasse, B. 1111, 1392. Errors in determination of polarisation of bagasse, B., 1111.

Behnken, H., accuracy of calibration of X-ray doses, A., I, 55.

Běhounek, F., and Novák, F. V., retention of radioactive substances in the body of rats and the lethal dose, A., III, 348.

Behr, A., increasing viscosity of [rubber] latex mixes, (P.), B., 374.

Behr, G. See Rippel, A.

Behr-Manning Corporation. See Buckner, O. S., and Schacht, E. C.

Behre, A., food chemistry and food con-

trol, B., 615.
Behre, C. H., jun., Osborn, E. F., and Rainwater, E. H., contact ore deposition at the Calumet iron mine, Colorado, A., I., 204.

Behre, J., dispersing agents and softeners [for rubber], B., 702. Effects of dis-persing agents in filled [rubber] mixings, B., 702. From laboratory- to works mixing [of rubber], B., 1244. See also under Lehmann & Voss & Co.

Behre, J. A., and Benedict, S. R., precipitation of creatinine rubidium picrate from blood-plasma filtrates, A., III,

Behrendt, W., explanation of photo-electric effect with cuprous oxide, A., I, 64.

Behrens, C. A., and Nielsen, F. A., purification of suspensions of virus of vaccinia by carbon dioxide, A., III, 183.

Behrens, H. C. A., and Meyer, R. O., apparatus for effecting growth of crystals in vacuo, (P.), B., 307.

Behrens, M. See Feulgen, R. Behrens, O. K., and Du Vigneaud, V synthesis of anserine from l-1-methylhistidine, A., II, 468. See Du Vigneaud, V.

Behrens, W. U., factors controlling the effects of manuring, B., 1101.

Behringer, H., air conditioning in humid climates, B., 1281.

See also Hüttel, R.

Behrman, A. S., water purification to meet paper-mill requirements, B., 770. Treatment of fluid, (P.), B., 1337.

and Gustatson, H., effect of low- $p_{\rm H}$ waters on zeolites, B., 1.

Beickert, P. See Heilmeyer, L. Beier, H. See Brintzinger, H.

Beil, A., progress in production of fast colours in the textile industry, B., 130.

Beilenson, B., preparation of 1-methylbenzoxazole, A., II, 392.

See also Kodak, Ltd.

Beimann, W., underfired coke oven, (P.), B., 1157.

Beininson, I. D., and Borschtsehevski, M. M., combustion of ferro-coke, B., 7.

Beintema, J., structure of crystal antimoniates, A., I, 604.

Beischer, D., and Winkel, A., directed coagulation of aërosols. II. Determination of size of elementary magnets of nickel and iron, A., I, 460.

Beisser, G., preservation of substances of animal origin, (P.), B., 978.

Bekk, J., printing speed, printing ink, and printing paper, B., 1322.

Bekkedahl, N., Wood, L. A., and Wojcie-

chowski, M., physical properties of isoprene, A., I, 174.

Bekker, J. G. See Wijk, C. M. van.

Beklemischeva, T. See Essin, O.

Belaev, A. F., and Chariton, J. B., transmission of a detonation between initiating explosive substances. I. General aspect of the phenomenon. III. Size of particles transmitting the detonation, Â., I, 191.

Chariton, J. B., and Rdultovskaja, E., transmission of a detonation between initiating explosive substances. II. Influence of distance between charges and effect of surface area of the passive charge on probability of transmission of a detonation, A., I, 191.

Belaev, L. I., pseudo-extraction and some specific properties of films obtainable thereby, A., I, 408. Electrophoresis of lamellæ at the interface of liquid phases, A., I, 461.

Belak, S., and Szathmáry, J., effect of the white bean on œstrus in the mouse, A., III, 437.

Belani, E., wood flour, its production and use, B., 443. Corrosion protection of refrigerating plants, B., 929. Evaluation of extracted residues of chestnut, oak, and quebracho woods, B., 1187.

Belash, F. N., flotation of phosphorites from the Sosh deposits in the Baschkir Republic, B., 132. Carboxylic acids as reagents in flotation of apatite, B., 132.

Belcher, C. F. See Du Pont de Nemours & Co., E. I.

Belchetz, A. See Shell Development Co. Belderbos, C., X-ray investigation of structure of cobalt and nickel bromate hexahydrates, A., I, 603. Belenitzka, D. S., determination of magnes-

ium in medicines, B., 839.

Belenkaja, A. P. See Klebanski, A. L. Belenki, L. I., and Sokolov, I. I., electrometric analysis of mordanting baths for the textile industry, B., 30.

Belenki, M. S., formation of hair-silver on charcoal surface, A., I, 180.

Belfiori, O. See Oliverio, A.
Belgrano, C. R., treatment of arterial

hypertension with octyl alcohol, A., III,

Belgrave, W. N. C., and Lambourne, J., cultivation and manuring of coconuts in Malaya, B., 957. Manuring oil palms, B., 1253.

Beliaev, N., removal of oil from sunflowerseed oil cake, B., 58.

Belikov, B., composition of "burnt-rock" from Kusnezk-Bechen, A., I, 383.

Belin, M., and Ripert, J., cryptotoxic and bactericidal action of soaps, A., III, 148.

Belitzer, V. A., effect of creatine on muscle respiration, A., III, 210.

Zjukova, M. A., and Falk, A. J., respiration curve of isolated frog muscle, A., III, 208. Aërobic cycle of chemical transformations in muscle, A., III, 208. See also Rubel, W. M.

Beljaev, P. P., and Birman, J. N., electrolytic lead plating of chemical apparatus,

B., 453.

Beljankin, D. S., microscopy of nonmetallic inclusions in steel, B., 445.

Belkin, N. I., fundamental amelioration of solonetz, B., 704.

Bell, A., Hawkins, W. L., Wright, G. F., and Hibbert, H., occurrence of acetone and syringic aldehyde as degradation products of lignin substances, A., II, 204.

Bell, A. C. See Gallay, W. Bell, D. J., glycogen. VI. Molecular structure of horse muscle-glycogen, A., II, 400. Molecular structure of glycogen from the whole tissues of Mytilus edulis, A., III, 7.

Friedmann, E., and Williamson, S., reaction between sodium iodide and toluenesuIphonyl derivatives of gluco-

furanosc, Å., IĬ, 136.

and Synge, R. L. M., reaction of 4:6ethylidene-\beta-methylglucoside derivatives; 4:6-dimethylglucose, A., II, 484.

Bell, D. S., Speneer, D. A., and Hardy, J. I., influence of various factors on growth and quality of fine wool from merino sheep, B., 826.

Bell, G. D. H., crops and plant breeding, B., 820. Vernalisation: its meaning and practical application, B., 1251.

Bell, G. H., and Robson, J. M., effect of hormones on activity of the uterine

muscle of the guinea-pig, A., III, 359. Bell, J., salt hydrates and deuterates. I. Dissociation pressures of certain deuterrates, A., I, 243. Spectrographic studies of the explosive combustion of methane, A., I, 312.

Bell, (Miss) J. C., Bridge, W., and Robertson, A., constituents of bark of Zanthoxylum americanum (Mill). IV. Constitution of xanthyletin, A., II,

and Robertson, A., constituents of bark of Zanthoxylum americanum (Mill). II. Xanthyletin, A., II, 72.

Bell, J. H. See Dinley, C. F.

Bell, M. E., physiological aspects of the cobalt problem [in animal nutrition], A., III, 299.

Bell, R. P., relations between energy and entropy of solution and their significance, A., I, 242. Exact and approximate expressions for permeability of potential barriers to light particles, A., I, 286. Kinetics of aldol con-

densation, A., I, 622. and Burnett, R. Le G., acid-base catalysis in gas reactions. I. Depolymerisation of paraldehyde, A., I,

Lidwell, O. M., and Vaughan-Jackson, M. W., acid catalysis in non-aqueous solvents. IV. Depolymerisation of paraldehyde, A., I, 88.

See also Baughan, E. C., and Robinson, R. A.

Bell, W. P. See Tweedy, W. R.

Bell Brothers (Manchester, 1927), Ltd., and Benson, C. G., apparatus for filtering water and other liquids, (P.), B., 305.

Bell Telephone Laboratories, Inc., and Haring, H. E., storage battery, (P.), B.,

and Smith, G. O., asymmetrical conducting device, (P.), B., 695.

and Stallard, B., constant-temperature device, (P.), B., 990.

Werring, W. W., and Huxham, T. S.,

securing adherence of finishes to metal and other materials, (P.), B., 813.

Wilson, J. R., Acker, J. T., and Hartman, C. D., electron emitter; [coated filament], (P.), B., 803.

Bellamy, J. C. See Parkinson, D. B.

Bellavita, V., diphenyl series. VII. New derivatives. VIII. Bromination of 2nitro-4'-amino- and 4-nitro-2'-amino-

diphenyl, A., II, 143, 186.
Bellet, E. M., chemical changes which accompany the ageing of brandy, B.,

831.

Bellingham, L., double refraction effect in certain fatty materials, A., I, 445.

Bellini, L. See Ardy, C., Filippon, S., and Lombroso, U.

Bellinson, H. R., simplified trapezoid tearing test [for fabrics], B., 1319.

Belloni, L. See Martini, E Bellot, M. See Taboury, M. F.

Bellows, J., surface anæsthesia in ophthal-mology, A., III, 25. Biochemistry of the lens. IX. Influence of vitamin-C and thiol compounds on production of galactose cataract, A., Ill, 300.

and Rosner, L., biochemistry of the lens. X. Preparation of glutathione from the crystalline lens, A., Ill, 300.

Bellustin, S. V., theory of motion of electrons in crossed electric and magnetic fields with space charge, A., I, 159.

Belohradský, H., value of some cancer reactions in early diagnosis of cancer of

the uterus, A., III, 123.

Beloit Iron Works, pressure- and vacuumforming papermaking machine, (P.), B., 1194. Papermaking machinery, (P.), B., 1325.

Belopolski, A. P., Boguslavski, I. M., and Urusov, V. V., velocity of absorption of carbon dioxide by ammonia-salt solutions, A., I, 468.
Schpunt, S. J., and Palkina, I. M.

partial pressure of ammonia, carbon dioxide, and water over ammoniacal sulphate and chloride solutions, A., I., 518.

Schulgina, M. N., Serebrennikova, M. T., and Schpnnt, S. J., nitric acid treatment of phosphates. I. System CaO-P₂O₅-N₂O₅-H₂O, at 25°, A., I, 363.

Taperova, A. A., Serebrennikova, M. T., and Schulgina, M. N., physicochemical analysis in sulphuric acid treatment of phosphates. I. Ternary system CaO-P₂O₅-H₂O, at 80°. II. A., I, 463; B., 1044. and Urusov, V. V., physico-chemical

analysis in connexion with nitrio acid treatment of phosphates. II. Solubility of calcium nitrate in aqueous nitric acid, A., I, 566. Physico-chemical studies of carbonation of aqueous ammoniacal sodium sulphate, B., 1198.

Belopolski, M. P., and Maximov, O. B., conjugated dehydrogenation of ricinoleic

acid, A., II, 366. Belotelov, L. P. Seo Postnikov, N. N. Belotzerkovski, M. I., vapour-phase hydrogenation of technical phenols, B., 647. Belov, A. V., and Neuman, M. B., antiknocks and pro-knocks in the combustion

of fuels, A., I, 366. Belov, K. A., and Kagan, G. B., waterproofing of briquettes pressed from sulphite-cellulose waste, B., 102. See also Kukuschkin, S. I.

Belov, K. P., and Gelfenbein, A. A., magneto-oscillographic method of control of thermal treatment of steel, B., 680.

Belova, A. P. See Guljaev, A. P.
Belova, R. S. See Gerschenovitsch, M. S.
Belovodski, V. V., and Goluschko, N. A.,
structural brick from waste from
magnesite production, B., 914.

Belozerski, A. N., nucleoproteins and nucleic acids of soya-bean seedlings, A., IlI, 162.

and Dubrovskaja, I. I., proteins and thymonucleic acid of horse-chestnut (Æsculus hippocastanum) seeds, A.,

and Tschigirev, S. D., nuclein complex of French-bean seedlings, A., III, 162. Belski, V. P., action of various potassium

fertilisers, B., 170.

Belt, J. A. F. van den, relation between iodine and composition of the diet [and goitre], A., III, 89.

Belton, J. W., effect of dilute hydrochloric acid on surface tensions of aqueous salt solutions, A., I, 76. Surface tension of N-chloroacetanilide-salt-water mixtures, A., I, 234. Salting out of gases and volatile non-electrolytes, A., I, 307. Rate of reaction between ions in solution, A., I, 467. Effect of amino-acids on the surface tensions of sodium chloride solutions, A., I, 512.

Beltrametti, L., sexual function in relation to water economy and especially to

diabetes insipidus, A., III, 58. Beltrami, W. See Rondoni, P.

Beltran, E., Aldebert, P., and Grasset, A., physico-chemical studies of the sap of vines, A., III, 283. Oxidation-reduction potential of vine sap, A., III, 441.

Belval, H., fructosides of Amaryllidaceæ: Lycoris and Narcissus, A., III, 503. See also Colin, H.

Belyavin, P., filters for purifying liquids or gases, (P.), B., 633.

Bemant, C., crucible furnaces, (P.), B., 509.
Bemis, W. S., primary [water-]treatment
plant includes magnetite filter, B., 1414.

Bemmel, P. M. van, and Kreulen, D. J. W., a 5-h.p. "National" Diesel engine converted into an apparatus for determining the cetene value of Diesel oils, B., 109.

Benaglia, A. E. See Bodo, R. C.

Bénard, H. See Fiessinger, N., and Villaret, M.

Bénard, J., stability of solid solutions of ferrous and cobaltous oxides, A., I,

and Chaudron, G., preparation of ferrites by substitution of ferrous ions in magnetite, A., I, 259.

Bencowitz, I., suggested procedure in design of sheet asphalt, B., 202.

and Texas Gulf Sulphur Co., sulphur burner, (P.), B., 343.

Bender, C. B., molasses hay silage, B., 494.
Tucker, H. H., Krueger, W. C., Pfau,
K. O., and Fox, A. S., molasses hay silage, B., 284.

Bender, H. See Hirschkind, W., and Ramage, W. D.
Bender, H. L., structure of heated resinous

films, B., 1370.

and Bakelite Corp., [phenol-aldehyde] synthetic resins and compositions, (P.), B., 263. Resinous composition, (P.), B., 1241.

Bender, R. C., Ansbacher, S., Flanigan, G. E., and Supplee, G. C., influence of dextrin and sucrose on growth and

dermatitis, A., III, 256. and Supplee, G. C., quantitative relationships in vitamin-B complex studies, A., III, 404.

See also Ansbacher, S.

Bendix Aviation Corporation, fluid compositions, especially for use in hydraulic apparatus, (P.), B., 635.

Bendixen, H. A., churn-cleaning methods, B., 490.

Benecke, O. See Schmalfuss, H.

Benedetti-Pichler, A. A., qualitative analysis of microgram samples, A., I, 635. Micro-analysis of pigments used in the fossæ of the incisions of Chinese

oracle bones, B., 467. and Spikes, W. F., separation in the aluminium-chromium group, A., I, 264. Qualitative separations on a micro-scale. II. Separations in the ammonium sulphide group, A., I, 264. Confirmatory tests for beryllium and gallium, A., I, 327.

Benedicenti, A., pharmacology of the kidneys, A., III, 28.

Benedicks, C., influence of sea-water and climatic conditions on rusting of iron

and steel, B., 1059.
Borgmann, C. W., and Sederholm, P., resistometric method of determining electrothermic homogeneous effect and the influence of gaseous ions, A., I, 229.

Benedict, F. G., stack of constant volume for human respiration experiments, A.,

Ш, 1.

Kung, L. C., and Wilson, S. D., basal metabolism and urinary nitrogen excretion of Chinese, Manchus, and others of the Mongolian race, A., III, 380.

Benedict, F. G., and Sherman, H. C. [with Campbell, H. L., and Zmachinsky, A.], basal metabolism of rats in relation to old age and exercise during old age, A., III, 464.

Benedict, J., and Mezey, K., effect of thyroxine on the rate of oxidation of alcohol in the dog, A., III, 187.

Benedict, M., alternating current bridge in laboratory temperature control, A., I,

Benedict, S. R. See Behre, J. A. Benedict, W. L. See Universal Oil Pro-

ducts Co.

Benedict, W. S., Morikawa, K., Barnes, R. B., and Taylor, H. S., analysis of isotopic mixtures of deuteromethanes and ethanes by infra-red absorption spectra, A., II, 131. See also Morikawa, K.

Benek, J., and Lieben, F., combination of sugars with amino-acids. III. Experiments with animal charcoal, A., II, 483.

Benetato, G., and Oprean, R., asthenic effect of adrenalectomy and the physicochemical properties of muscle, A., III,

See also Nitzeseu, I. I., and Urechia, C. I.

Bénévent, M. T. See Roche, J.

Benford, F., monochromater for the near ultra-violet, A., I, 331.

Benford, G. A., Khambata, (Miss) B. S. and Wasserman, A., equilibrium and kinetics [of diene synthesis] in the gaseous state and in solution, A., I, 313.

Bengis, R. O., coffee staling unpreventable, B., 388.

Bengolea, A. J., Suarez, C. V., and Ferraclni, R. S., blood-amino-acids in surgery,

A., III, 111. Bengough, G. D., and Whitby, L., corrosion of clektron alloy AM 503 by leaded fuels. I. Mechanism of attack, B.,

and Wormwell, F., design, interpretation, and uses of standard corrosion tests in salt solutions and industrial waters. II., B., 565. Differential aëration as a factor in the localisation of corrosion, B., 1355.

Benham, G. H., distribution of urea in blood and aqueous humour, A., III,

Davson, H., and Duke-Elder, W. S., total osmotic concentrations in serum and aqueous humour, A., III, 337.

Benis, L. See Kamieński, B.

Benjamin, H. A., and Amer. Can Co., temperature-measuring apparatus, (P.), B., 635.

Benjamin, L. V. See Hulbert, H. W. Benjamin, M., and Jenkins, R. O., surface migration of barium, A., I, 501.

Benkovski, S. V. See Boguslavski, I. M., and Kiritschenko, N.

Benndorf, O., anthracene-I:2-dicarboxylic anhydride, A., II, 102.

Benner, J. R. See Knight, O. A.

Benner, R. C., and Melton, R. L., abrasivecoated fabric, (P.), B., 551. Abrasivecoated articles, (P.), B., 551. See also Carborundum Co.

Benner, R. W., value of ether and chloroform narcosis in treatment of cancer, A., III, 123.

Bennet-Clark, T. A., Greenwood, A. D., and Barker, J. W., water relations and osmotic pressures in plant cell, A., III, Bennett, A. R., and Hartley, H., integrating method for measurement of total radiation emitted by domestic heaters,

Bennett, C. G., and Paterson Parchment Paper Co., filter, (P.), B., 1147. Bennett, C. W. (Illinois), simpler aspects of

electro-chemistry, A., I, 189.

Bennett, C. W. (Washington), correlation between movement of curly-top virus and translocation of food in tobacco and sugar beet, A., III, 319.

Bennett, E., polyuronide from tobacco stalks, A., III, 445. Comparison of the chemical composition of pasture grass with a mixed concentrate, B., 1128.

Bennett, E. D., and Williams, C. R., crude [oil] stabilisation and return of residue gases to wells, B., 1003.

Bennett, F. H., [corrosion-resisting] copper alloys, (P.), B., 250.

Bennett, F. T., fungus diseases of bowling

and golf greens, B., 171.

Bennett, G. A. See Drinker, C. K. Bennett, G. M., Lesslie, M. S., and Turner,

E. E., configuration of heterocyclic compounds. V. Thianthren and phenoxthionine derivatives, A., II, 207.

Bennett, H. See Yaux, G.
Bennett, H. T., Burkitt, J. L., and MidContinent Petroleum Corp., removing oil from ββ'-dichlorodiethyI ether, (P.), B., 1171. and Mid-Continent Petroleum Corp.,

high viscosity index oils, (P.), B., 1013. Apparatus for making highviscosity index lubricating oils, (P.), B., 1166.

Story, Le R. G., and Gasoline Antioxidant Co., gasoline, (P.), B., 644, 1162.

Bennett, J. G., broken coal, B., 101. Solid fuel burning appliances, B., 999. Bennett, J. H. See Seevers, M. H.

Bennett, L. L. See Russell, J. A.

Bennett, M. A., metabolism of sulphur. V. Replaceability of l-cystine in diets of rats with some partially oxidised deriv-

atives, A., III, 304.
Bennett, O. G., and Catalyst Res. Corp., apparatus for diffusing gases, (P.), B.,

Bennett, P. M., whiteware research. III. Substitution of cristobalite for quartz in a whiteware body, B., 1050.

Bennett, T. I., Davie, T. M., Gairdner, D., and Gill, A. M., treatment of diabetes; clinical and experimental observations with new insulins, A., III, 322.

Bennett, W. H. See Darby, P. F. Bennett-Clark Co., Inc. See Codier, O., and Hoover, C. O.

Bennewitz, K., and Rötger, H., qualitative-semi-quantitative evaluation of spectrograms in spectral analysis, A., I, 528.

Bennie, H. D., spalling of fireclay bricks, B., 1341.

Benninghoff, W. E. See Tran, M. A. Beno, N, J. See Madenwald, F, A.

Benoit, J., and Bogdanovitsch, S. B., fatty acids, lipin-phosphorus, and cholesterol in duck's blood after thyroidectomy and injection of pituitary anterior lobo extract, A., III, 363.
Benoy, M. P., and Elliott, K. A. C.,

metabolism of lactic and pyruvic acids in normal and tumour tissues. V. Synthesis of carbohydrate, A., III,

See also Elliott, K. A. C.

Benrath, A., Gjedebo, F., Sehiffers, B., and Wunderlich, II., solubility of salts and salt mixtures in water at temperatures above 100°. I., A., I, 233.

and Hitzbleck, E., application of the thaw-melt method to inorganic systems. II., A., I, 243.

Benroth, J. S. Sec Sweek, W. O.

Bensley, E. H., galactose-tolerance test as aid to diagnosis in jaundice, A., III, 124. Benson, A., and Sawyer, R. A., hyperfine structure and nuclear moment of barium, A., I, 540.

Benson, C. G. See Bell Bros. (Manchester, 1927).

Benson, H. K., laboratory studies of sulphite[-cellulose] waste liquor, B., 194.

Bent, F. A., and Wik, S. N., hydrated olefines [alcohols], (P.), B., 416.

See also Shell Development Co. Bent, H. E., and Forziati, A. F., activity of sodium and mercury in solid sodium amalgams, A., I, 30.

and Swift, E., jun., activity of sodium in dilute sodium amalgam, A., I, 30.

Bentley, G. T., and Kirk, P. L., quantitative drop analysis. VI. Total nitrogen by diffusion, A., I, 324.

See also Kirk, P. L.

Bentsáth, A., and Das, N. B., vitamin-P test, A., III, 365.

Rusznyák, S., and Szent-Györgyi, A., vitamin nature of flavones, A., III, 46. Vitamin-P, A., III, 234.

and Szent-Györgyi, A., vitamin-P, A., III, 441.

Benyon, J. H., Heilbron, I. M., and Spring, F. S., sterol group. XXXIII. Constitution of the isomeric ethers of cholesterol, A., II, 416.

Benz, C. C., fractionation of liquids, (P.), B., 307.

Benz, F., whale catching and whale oil production, B., 1082.

Benzol Verband, stability of fuels, B., 1298. Beran, V., electrical purification of gases, (P.), B., 363.

Beraud, P. See Schoen, M. Berbé, F. See Soc. Carbochimique. Bercovitsch, M. R., determination of sul-

phur in refined copper, B., 682. Berczeller, A., granular active earths [in petroleum refining], B., 870.

and Erdheim, E., influence of water on bleaching [of oils] with fuller's earth, B., 258.

Berdennikov, V. P., Bresler, S. E., Zelmanov, I., and Schtrauf, E. A., structure of surface layer of a liquid, A., I, 25.

Bereczky, A., and Koch, A., effect of heat of hydration of cement on quality of concrete, B., 348.

Berenblum, I., and Bonser, G. M., experimental investigation of "aniline cancer." A., III, 171.

Berenblum, L. S. See Fialkov, J. A. Berend, N., and Fischer, Marie, absorption of vitamin-O; modification of Tillmans' method for determining ascorbic acid in colourless body-fluids, A., III, 440.

Berens, C. Sec Chapman, G. H. Berenschtein, F. J., and Schpakovski, A. U., reaction of sugars with boric acid, A., I, 249.

Bereshnoi, A. S. See Uralov, M. A. Bereshnoi, N. D. See Aleev, B. S.

Berestneva, Z. J., and Kargin, V. A., use of aluminium amalgam electrode for determining the activity of aluminium ions in aqueous solutions, A., I, 311.

Beretta, A., synthetic anthraquinone and its derivatives, B., 415.

Berezan, K., Dobromislova, A., and Dogadkin, B., polymerisation of butadiene in emulsions. II. Action of colloidchemical factors, B., 1378.

See also Balandina, V.

Berg, C. J. See Alklum Storage Batteries. Berg, C. P. See Conrad, R. M. Berg, E. L., occurrence of diaspore in quartzite, A., I, 587.

Berg, G., felting properties of mordanted [carrotted] hare and rabbit fur, B.,

Berg, G. J. van den. Sec De Haas, W. J. Berg, H., action of thyroxine on heart muscle metabolism, A., III, 76. Effect of vitamin-C on heart muscle metabolism in hyperthyroidism, A., III, 438. Berg, J. ter, and Jaeger, F. M., possibility

of distinguishing right- and left-handed structures in crystals by means of their Laue patterns, A., I, 401.

See also Jaeger, F. M., and Terpstra, P. Berg, L. G., preparation of pure ferrous chloride not containing ferric chloride, A., I, 196. 25° Solubility isotherm of the system K₂O-P₂O₅-H₂O, A., I., 617. Solubility isotherm of the reciprocal system FcSO₄-NaCl at 25°, A., I, 618.

Berg, P. van den, nitration of benzylaniline and its derivatives. II., A., II, 95.

Berg, R., and Fahrenkamp, E. S., specific determination and separation of thal-lium with thionalide [thioglycollic β-aminonaphthylamide], A., I, 476. Micro-determination of thallium by potentiometric titration using "thionalide," A., I, 632.

Fahrenkamp, E. S., and Roebling, W.,

micro-analytical application of "thion-

alide," A., I, 263.

Berg, S., accuracy of Andreasen's sedimentation pipette, B., 1285.

Bergami, G., chemical activity of nerves, A., III, 258.

Boeri, E., and Baer, P., colorimetry during development of colour, A., I. 99.

Cantoni, G., and Gualtierotti, T., liberation of biologically active substances from cut surface of nerve during physiological or artificial stimulation. I. Action on leech-muscle preparations, A., III, 63. Liberation from stimulated nerve of a substance sensitising leech-muscle preparations to acetyl-choline, A., III, 178. Influence of glucose on action of escrine and acetylcholine on leech muscle, A., III, 178.
Bergamin, F. See Guimares, J. R. A.

Berge, C. See Le Chuiton, F.

Bergedorfer Eisenwerk Akt.-Ges. Astra-Werke, centrifugal separators, (P.), B., 5. Apparatus for determination and regulation of the fat content in milk, (P.), B., 495. Plate heat exchangers, (P.), B., 630.

See also Aktieb. Separator.

Bergel, F., and Todd, A. R., anourin.

VIII. Some analogues of aneurin, A., II, 472.

See also Todd, A. R.

Bergelson, A. B. See Jolson, L. M.

Bergen, H. van, precision determination of lattice constants by the compensation method, A., I, 399.

Berger, A. See Skrabal, A. Berger, C. W., practical aspects of sunstability [of petrols], B., 641.

Berger, E., crushing and sieving of glass to ensure control of the surface of the grains, B., 136.

Berger, G., molecular shape and cohesion. I. Intramolecular compensation of cohesional forces in thread-shaped molecules, A., I, 349.

Berger, H., interferometric determinations with halogen-substituted paraffins, A., I, 350. Semi-micro methods for determining the elements in organic analysis, A., II, 476.

See also Darapsky, A.

Berger, H. G., and Socony-Vacuum Oil Co.,

synthetic resins, (P.), B., 1241.
Berger, J., Johnson, M. J., and Peterson IV. H., proteolytic enzymes of common moulds, A., III, 141. Extent of proteolysis by enzymes of moulds and bacteria, A., III, 432.

Bergeron, P., bricks of artificial agglomerated mullito for regenerator packing,

Berges, A., centrifugal purification of liquids [e.g., paper pulp], (P.), B.,

Berggren, K. G., pigment or colouring mass intended for production of relief-like or plastic surfaces [for walls, etc.],

(P.), B., 1210.

Bergius, F., conversion of wood into carbohydrates and problems in industrial use of hydrochloric acid, B., 484.

Bergman, A. G., discovery of boron in Central Asia, A., I, 381.

and Dombrovskaja, I. S., double decomposition in absence of a solvent. XXXI. Multi-component mutual sys-

tems, A., I, 82. and Egorov, V. S., vapour pressure of sodium ferrocyanide, B., 903.

Klementiev, V. A., and Pevzner, E. B., hydrolysis of magnesium chloride, B., 132.

Liashenko, A. I., and Obukov, A. P., hydrolysis of magnesium chloride, B., 132.

and Obukov, A. P., use of magnesium chloride; physicochemical principles of extraction and reworking of magnesium chloride, B., 132.

and Poljakova, L. B., physicochemical basis of obtaining complex potassium

fertilisers, B., 707.

and Vaksberg, N. M., double decomposition in absence of a solvent. XXXIII. Mutual reversible system sodium and potassium nitrates and

sulphates, A., I, 364.
Vassiliev, B. B., and Sinani, S. S., sodium and potassium carbonates and bicarbonates in aqueous solutions, A., I, 82.

Bergman, A. J., and Turner, C. W., composition of colostrum of dairy goats, A., III, 169. Comparison of methods of extraction of the lactogenic hormone, A., III, 184. Composition of milk from rabbits stimulated by the lactogenic hormone, A., III, 437.

Bergman, H. C. See Drury, D. R.

Bergman, H. F., and Wilcox, M. S., distribution, cause, and relative importance of cranberry fruit rots in Massachusetts in 1932—3 and their control by spraying, B., 1107. Bergman, W. L. See McNally, W. D.

Bergmann, A., preparation and properties of casium and rubidium sulphide, sclenide, and telluride, A., I, 256.

Bergmann, E., Walden inversion in substitution reactions on inorganic complex compounds, A., I, 196.

[with Sprinzak, Y.], changes of configuration during reactions at singly and doubly bound carbon atoms, A., II, 361.

and Bergmann, F., glycyrrhetic acid, A., II, 203. Dienc reactions involving aromatic nuclei; phenan-threne system, A., II, 407.

and Blum-Bergmann, O., synthesis of triphenylenc, A., II, 407. Tautomerisation reactions in the anthracene series, A., II, 407. Synthesis of methylcholanthrene, A., II, 423. Syn-2:3-cyclopentenophenthesis of anthrene, A., II, 423.

See also Weizmann, C.

Bergmann, F. See Bergmann, E. Bergmann, F. von. See Straub, W.

Bergmann, L., high-frequency vibrations and ultrasonics, A., I, 122.

and Goehlich, H. J., detection of ultrasonic waves in liquids, A., I, 122

Bergmann, M., and Fraenkel-Conrat, H. L., rôle of specificity in the enzymic synthesis of proteins; syntheses with intracellular enzymes, A., III, 393.

and Fruton, J. S., proteolytic enzymes. XII. Specificity of aminopeptidase and carboxypeptidase; new type of enzyme in the intestinal tract. XIII. Synthetic substrates for chymotrypsin, A., II, 234; III, 97.

Fruton, J. S., and Fraenkel-Conrat, H. L., proteolytic enzymes. XV. Intracellular proteolytic enzymes, A., III, 312.

Fruton, J. S., and Pollok, H., differentiation of pancreatic trypsins on the basis of their specificities, A., III, 269.

and Niemann, C., structure of proteins; ox hæmoglobin, ovalbumin, ox fibrin, and gelatin, A., III, 168. Proteolytic enzymes. XIV. Nature of enzymic degradation of proteins, A., III, 269. Newer biological aspects of protein

chemistry, A., III, 416.

Bergmann, W., marine products. IV. Sterols of the starfish. V. Stigma-sterol in molluses, A., II, 148; III, 199. Sterols of silkworm fæces, A., III, 88.

See also Sperry, W. M., and Stavely, H. E.

Bergneon, S., why decating improves the

finish of fabrics, B., 538. Bergo, G. J. See Titz, I. N.

Bergsøe, P., [tungsten] alloy of high density, B., 796.

Bergsteinsson, I. See Basterfield, S.

Bergström, H., evolution [of gas] from fresh and stored charcoal, B., 1001.

and Cederquist, K. N., semi-plant tests on producing high-percentage [calcium] acetate direct from charcoal-oven gases by washing the gases with milkof-lime, B., 9.

Cederquist, K. N., and Trobeck, K. G., heat evolved on heating wood with calcium hydroxide and water under pressure, B., 311. Production of benzine and lubricating oils from wood, tar, and shale oil by hydrogenation, B., 314. Production of gasoline and lubricating oils from wood tar and shale oil by hydrogenation, B., 865. Cymene and toluene from terpenes, (P.), B.,

Bergström, S. See Jorpes, E.
Bergstrom, F. W., attempts to prepare cerous amide, A., I, 473. Modification of the Berl-Kullmann m.p. block; electrically heated glass m.p. apparatus, A., I, 478.

and Gilmore, A. E., behaviour of inulin in liquid ammonia, A., I, 461.

and Moffat, A., Claisen-type condensations with quinaldine and related ammono-ketone ethers, A., II, 431.

Bering, B. P. See Sementschenko, V. K., and Tarassov, V. V.

Berk, A. A. See Davidson, J. M., and Schroeder, W. C.

Berk & Co., Ltd., F. W. See Marriott, R. H.

Berkenheim, A. M., anti-malarials. I. Anti-malarials from viewpoint of electronic configuration of their molecules. II. Synthesis of 4-methoxy-2-aminocarbazole and its diethylaminotrimethylene derivatives, A., II,

and Livschitz, R. S., application of the electronic theory in organic chemistry. VIII. Electroisomerism of o-toluidine and jts derivatives, A., II, 12.

Berkhoff, G., ammonium sulphate crystallisation, B., 1043. Gum formation [in coal gas] and its prevention, B., 1155.

Berkner, F., action of magnesium [on plants], B., 71. After-effects of potassic fertilisers and of time of planting on seed value of potatoes, B., 598. Green manuring. II., B., 1102.

[with Hecker, G.], influence of late planting of potatoes on seed value of crop, B., 598. Course of nutrient intake of potatoes treated by Breslau " wilting method in relation to time of planting and nature of potash fertiliser used, B.,

Berko, J., and Kardos, R. F., honey of abnormal composition, B., 1401.

Berkovitsch, V. L., and Kuliaschev, J. V., determination of boron in "Dow" mixture, B., 1046.

Berl, E., Fritz Haber, A., I, 430. Origin of coal, asphalt, and petroleum, A., I, 588. Colloidal silicic acid (silica gel) from water-glass, (P.), B., 237. Preventing the attack of solutions containing halides on iron and iron alloys, (P.), B., 249.

Berlek, J., clinker-ring formation [in rotary cement kilns], B., 242.

Berlin, L. E., and Goritzkaja, L., obtaining potassium superphosphate, B., 133. Preparation of phosphorus-nitrogen fertilisers based on urea-ammonia liquor, B., 377. Concentrated potassium-ammonium superphosphates, B.,

Goritzkaja, L., and Zasedateleva, A., treating ordinary and acid superphosphates with ammoniacal solutions of ammonium nitrate, B., 820.

Nikonova, I., and Fiskina, R., preparation of nitrogen-phosphorus-potassium fer-tilisers from Viatka phosphorite, potassium chloride, and nitric acid, B., 1250.

Voznesenskaja, O., Nikonova, I., and Fiskina, R., determination of hygroscopic and crystal hydrate water in superphosphate, B., 955.

Berlin-Karlsruher Industrie-Werke Akt .-Ges. See Deuts. Waffen- & Munitionsfabriken Akt.-Ges.

Berliner, E., relations between sugar formation and gassing power in wheat-flour doughs, B., 78. Gluten quality and gluten degradation by proteases of wheat grain, B., 721. Correlation between gluten content and gluten consistency in single grains of wheat and in varieties of wheat, B., 969.

and Kranz, W., colorimetric measurements as methods of rapid and micro-

determinations, B., 1073.

Berlingozzi, S., and De Ceeco, S., optically active amino-acids; [resolution of dl - benzenesulphonyl - a - methylasparagine], A., II, 180. and Naldi, G. F., optically active amino-acids, A., II, 139.

Berlowitz, M., apparatus for liquid treatment of air and other gases, particularly air-conditioning apparatus, (P.), B., 100. Berman, H., constitution and classification

of the natural silicates, A., I, 433. and Gonyer, F. A., roweite, a new

mineral from Franklin, New Jersey, A., I, 483. Berman, S. L. See Nakhmanovitsch, M. I.

Bermann, V., and Butacon Akt.-Ges., conversion of brewery yeast into bakery yeast, (P.), B., 1117.
Bernadiner, M. P. See Morgulis, N. D.

Bernal, J. D., molecular theory of liquid structure, A., I, 116.

and Fankuchen, I., structure types of protein "crystals" from virus-infected plants, A., III, 276.

See also Bawden, F. C., and Crowfoot, D. Bernamont, J., fluctuations in the resistance of thin films, A., I, 551.

and Magat, M., separation of isotopes, A., I, 536.

See also Bauer, E. Bernaradsky, C. V. See Lin, F. C.

Bernard, A. See Leulier, A.
Bernard, H. See Du Pont de Nemours & Co., E. I.

Bernard, R., influence of pressure on excitation function of bands of the ionised nitrogen molecule, A., I, 207. Electronic origin of nitrogen bands in spectrum of the aurora borealis; energy of the exciting electrons, A., I, 273.

Bernardi, A., mercuriation benzanthrone(-7), A., II. 475. and Scandola, L., fluorine in dental

enamel, A., III, 455.

Bernardi, Anthony, and Omnicolor, Ltd., colour photography, colour kinematocolour photography, colour kinematography, and photomechanical colour printing, (P.), B., 294. Coloured pictures, (P.), B., 294. Colour kinematography, (P.), B., 294. Colour filters, (P.), B., 294. Colour photographs, (P.), B., 294.

Bernardini, G., and Bocciarelli, D., energy and intensity of the groups of neutrons emitted from Po+Be. I. and II., A., I. 161.

Bernasovskaja, S. A., and Golikov, I. N., mass control of granular structure of carbon and alloy steels, B., 445.

Berndt, K., simultaneously spinning and twisting of artificial threads, (P.), B., 334. New laboratory apparatus for the pulp and paper industry, B., 1321.

Berndt, W. See Suhrmann, R. Berne-Allen, A., solubility of refined paraffin waxes in petroleum fractions, B., 867.

Berner, E., and Hjulstad, A., influence of the walls of the vessel on the course of alcoholytic reactions, A., II, 445.

Bernhard, A. See Rafsky, H. A. Bernhard, K., biological degradation of hydrogen esters. II., A., III, 174. [Biological] dehydrogenation of the cyclohexane ring, A., III, 384.

and Andreae, M., metabolism of dicarboxylic acids, A., III, 130.

See also Flaschenträger, B.

Bernhardt, H. See Schuler, W. Bernhart, F. W., Arnow, L. E., and Bratton, A. C., protein dialysis, A., III,

Bernhauer, K., and Forster, R., cyclisation

of geranic acid, A., II, 84. and Hoffmann, R., [attempted] synthesis of acyloins, A., II, 498. Preparation of glyoxaline derivatives from acyloins, A., II, 520.

Bernheim, F., and Bernheim, M. L. C. action of p-aminophenol on tissue oxidations, A., III, 424.

and Michel, H. O., formation of methæmoglobin by tissues, A., III, 247. Bernheim, M. L. C. See Bernheim, F.

Bernkopf, H. See Kligler, I. J.

Bernon, G. See Branas, J.

Bernouilli, A. L., and Kaspar, J., reaction velocity and solvatation; theory of hydrolysis of ethylene bromide with alcoholic alkali hydroxide, A., I, 313.

Bernstein, F., growth and decay, A., III, 125. Bernstein, (Mile.) F. See Herman, L.

Bernstein, H. J., Romans, R. G., Howden, O. H., and Martin, W. Howard, Raman effect in electrolytes. I. Raman spectra and electrolytic dissociation. II. Raman effect and the chemical bond, A., I, 62.

Bernstein, J. A., and Chvilivitzki, G. I operating an aluminium electrolytic cell,

B., 686.

Bernstein, N., physical chemistry and serological properties of spinal fluid, A., III, 57.

Bernstein, R. E., exerction of vitamin-C in sweat, A., III, 459.

Bernstein, Samuel. See Williams, H. H. Bernstein, Seymour. See Holley, C.

Bernstein, S. S. See Volinetz, M. I.Berovitsch, R. Sec Tsehahovitsch, X.

Berraz, G., and Christen, C., simultaneous determination of calcium and magnesium by volumetric potentiometry, A., I, 579.

Berresford, J. K., detergent composition, (P.), B., 465. Berrier, H., distribution of substances act-

ing as vegetable auxins in Discoglossus pictus, Otth., A., III, 286. Distribution of substances acting as vegetable auxins in the organs of the guinea-pig, A., III, 367.

Berrigan, D. G., use of lard in cake baking, B., 1119.

Berrisford Engineering Co., Ltd., and Allen, R. H., separation of dust from coal, etc., (P.), B., 1008. Dust classifying, (P.), B., 1147.

Berry, A. E., brilliancy of bottled beers, B., 830.

Berry, A. S., and Berry Solder Co., [soft-] soldering compound, (P.), B., 580.

Berry, C. H., specific enthalpy of lowpressure steam, B., 737.

Berry, D. S. See Ridgway, W. Berry, G. P. See Sandholzer, L. A.

Berry, Harold, and Jones, John H., physical and chemical survey of the national coal resources; fractional gravity separation of the banded constituents of coal, B., 100.

Berry, Harry, bacterial filtration, B., 1131. and Goodwin, L. G., pyroxylin and pharmaceutical collodions, B., 391.

Berry, J. A., microbiology of frozen-pack berries with special reference to carbonation, B., 614.

and Diehl, H. C., freezing storage in relation to microbial destruction and retention of quality in sweet cider. В., 177.

Berry, J. L. See Alcock, P. Berry, M. H., and Manning, J. R., comparison of feeding values of steam-dried and flame-dried menhaden fish meal, B., 1129.

Berry, N. E. See Shuman, A. C.

Berry, P. A., Macbeth, A. K., and Swanson, T. B., carbonyl constituents of eucalyptus oils. I. Occurrence of cryptal. II. Seasonal variation of E. cneorifolia oil, A., II, 345, 426. d-Phellandral and d-4-isopropyl-\(\Delta^2\)-cyclohexen-1-one, A., II, 426.

Berry, T. M., and Socony-Vacuum Oil Co., test plug for oil-cracking stills, (P.), B., 521.

Berry Solder Co., Inc. See Berry, A. S. Bersch, H. W., and Seufert, W., polymorphism phenomena with tetrahydroberberine and canadine, A., II, 311. Bersie, H. G., concealed corrosion of in-

sulated metal panels, B., 575.

Bersworth, F. C. See under Bersworth
Labs., F. C.

Bersworth Laboratories, F. C., ethylenediamine, (P.), B., 22.

Bertein, F. See Auger, P.

Berthelot, A., and Amoureux, G., glutathione and ascorbic acid content of beetroot tumours caused by B. tumefaciens, A., III, 71. Composition of beetroot tumours caused by B. tumefaciens, A., III, 71. Sensitivity of aseptic seedlings to carcinogenic substances, A., III, 243.

See also Nègre, L.

Berthelot, C., new sources for production of hydrogen, B., 341. Synthetic motor spirits produced by reduction of carbon monoxide by hydrogen; methyl alcohol, Fischer's motor spirit, B., 407. Construction of modern coke ovens: refractory materials and reinforcements; control of expansion; cconomy of working, B., 744. Manufacture of liquid fuels by treating solid fuels with solvents, B., 751. Gas producers for motor vehicles, B., 863. Preparation of lubricants from coal and lignites, B., 864. High-grade fuels and lubricants for internal-combustion engines, B., 869. Quality of steels employed in construc-tion of autoclaves, B., 918. Metallurgical problems in construction of hydrogenation tubes and [oil-]cracking chambers, B., 919. Extraction of hydrogen from coke-oven gas used for production of synthetic petrol, B., 1154. Production of motor fuel by catalytic hydrogenation of carbon monoxide, B., 1298.

Berthelot, E., progress achieved in the hydrogenation of coal, lignite, and petroleum, B., 515.

Berthelsen, H. Sce Hjärre, A. Berthier, P. See Achard, C.

Berthois, L., and Furnestin, J., sediments dredged by the "President Théodore Tissier" (continental shelf of the English Channel and the North Sea), A., Berthold, R. E., and Cardinal Products, Inc., catalytic composition and its

manufacture, (P.), B., 36. Bertirotti, J., [wine] filter, (P.), B., 1396.

Bertl, E., Fürth, R., Obořil, F., and Sitto, K., induced radioactivity with neutrons from slow deuterons, A., I, 340. Induced radioactivity of silver with neutrons from slow deuterons, A., I. 390.

Obořil, F., and Sitte, K., artificial radioactivity with low potentials, A., I, 544.

Bertram, A., and Roth, W. A., heats of formation of silver chloride, bromide, and iodide, A., I, 186. See also Roth, W. A.

Bertram, P., minor elements in plant nutrition, B., 957.

Bertram, S. H., stirring under vacuum, A., I, 333. Mechanism of the elaidinisation reaction, A., II, 4. Hazel-nut oil, B., 58. Identification of animal fats and oils, particularly detection of hardened fish-liver oils in mixed fats,

and Mendel, H., Boeton-asphalt and heavy hydrogen (deuterium), A., I, 52. Bertrand, G., composition and method of analysis of lignified vegetable tissues, B., 124. Influence of manganese on nitrogen nutrition of plants, B., 170. "Security" stocks of wheat and their

preservation by chloropicrin, B., 608. and Briolay, conservation of wheat stocks, B., 831.

and Brooks, G., composition of wood of trunks and branches of principal indigenous trees, A., III, 161. Analysis and composition of lignified vegetable tissues; wood from angiosperms and gymnosperms, B., 766.

and Silberstein, L., comparative amounts of sulphur, phosphorus, and nitrogen in plants cultivated on the same soil, A., III, 82. Boron content of plants cultivated in the same soil, B., 713.

Bertrand, M. F., purifying masses for use in purification of gases, (P.), B., 410.

Bertsch, H., and Amer. Hysalsol Corp., preventing detrimental formation of lime and magnesia soaps [in treating textiles], (P.), B., 1330.

Bertsch, J. A., and Monsanto Chem. Co.,

p-aminophenol, (P.), B., 328.

Bertschinger, R., and Piwowarsky, E., mechanical properties of cast iron at high temperatures, B., 558. Bertuzzi, F. A. See Fester, G.

Béruard, G. See Leulier, A. "Berzelius" Metallhütten Ges.m.b.H., extraction of cadmium [from residues], (P.), B., 1227.

Besag, A., prevention of corrosion in water containers, (P.), B., 739.

Besalov, P., and Kobosev, N. I., preparation of oxide catalysts by deposition of aerosols. I. Catalytic activity of cupric oxide deposited from an aërosol, A., I, 624.

Besana, G., casein plastics, B., 466.

Besedin, S. M., oven for determining specific heat of refractory materials according to the U.S.S.R. Bureau of Standards specification, B., 550. Repair of nonmetallic heaters, B., 627.

See also Zamotaev, S. P.

Beskow, S., and De Laval Separator Co., self-draining separator bowl, (P.), B.,

Bessey, G. E. See Lea, F. M.

Bessudnova, M. F., determination of thermal conductivity of steel, B., 561. Best, A. P. See Bailey, C. R.

Best, C. H., effect of cholesterol and choline on liver-fat, A., III, 129.

and Campbell, James, anterior pituitary extracts and liver-fat, A., III, 149.

Cowan, C., and MacLean, D. L., heparin and formation of white thrombi, A., III, 250.

Grant, R., and Ridont, J. H., "lipotropic" effect of dietary protein, A., III, 128. Mawson, M. E. H., McHenry, E. W., and

Ridout, J. H., effect of diets low in choline, A., III, 128.

Best, J. C., Marsh, F. L., and Best Bros.

Keene's Cement Co., light-weight plasters,

(P.), B., 142.

Best, R. J., relation between activity of tobacco mosaic virus and p_{11} over the range $p_{\rm H}$ 5-10, A., III, 100. Visible mesomorphic fibres of tobacco mosaic virus in juice from diseased plants, A., III, 228. Determination of relative concentrations of viruses of ordinary and yellow tobacco mosaics and of tomato spotted wilt by the primary lesion method, A., III, 358. Artificially-prepared visible paracrystalline fibres of tobacco mosaic virus nucleoprotein, A., III, 489.

and Samuel, G., reaction of viruses of tomato spotted wilt and tobacco mosaic to the $p_{\rm H}$ of the medium, Λ ., III, 147. Effect of various chemical treatments on activity of the viruses of tomato spotted wilt and tobacco

mosaic, B., 712.

Best Brothers Keene's Cement Co. See Best, J. C., and Marsh, F. L.

Best Foods, Inc. See Vahlteich, H. W. Bestchastni, A. L. See Lavrov, F. A.

Bestougev, A. See Tschitschibabin, A. E. Bethe, H. A., nuclear radius and manybody problem, A., I, 60. Evidence for neutron-proton shells from nuclear masses, A., I, 546.

and Placzek, G., resonance effects in nuclear processes, A., I, 214.

and Rose, M. E., kinetic energy of nuclei in the Hartree model, A., I, 215.

and Spedding, F. H., absorption spectrum of Tm₂(SO₄)₃,8H₂O, A., I, 597. See also Hoffman, J. G., and Rose, M. E.

Bethke, R. M., and Record, P. R., sources of vitamin-A for chicks. I. Comparison of carotene and vitamin-A as found in cod-liver oil, A., III, 404.

Record, P. R., and Kennard, D. C., relation of vitamin-B₂ to hatchability of hens' eggs, A., 111, 232.

Record, P. R., Kick, C. H., and Kennard, D. C., effect of different sources of vitamin-D on the laying bird. I. Egg production, hatchability, and tissue composition, B., 725.

Record, P. R., and Wilder, F. W., effect of ration of the hen on the vitamin-B2 content of eggs: distribution of vitamin- B_1 and B_2 in normal eggs, A.,

III, 232 Record, P. R., Wilder, O. H. M., and Kick, C. H., effect of different sources of vitamin-D on the laying bird. II. Storage of vitamin-D in the egg and chick, and mineral composition of the

mature embryo, B., 725. See also Hunt, C. H., and Krauss, W. E. Bethlehem Mines Corporation. See Brode-

rick, S. J.

Bethlehem Steel Co. See Cook, E., Nieman, H. W., and Winship, B. W.

Betterton, J. O., and Amer. Smelting & Refining Co., antimony oxide, (P.), B., 668. Copper refining, (P.), B., 1360.

Lebedeff, Y. E., and Amer. Smelting & Refining Co., lead refining, (P.), B.,

Lindner, K. A., and Amer, Smelting & Refining Co., metallurgical apparatus, (P.), B., 1224.

McLellan, R. D., and Amer. Smelting & Refining Co., treatment of impure

antimony trioxide, (P.), B., 668.

Phillips, A. J., and Amer. Smelting & Refining Co., dezincing of aluminium, (P.), B., 581. Refining of copper alloys, (P.), B., 800. Treatment of metals [e.g. solder], (P.), B., 800. Treatment of mixed oxides of lead, tin, and zinc, (P.), B., 932. Treatment of brass and bronze secondary

metals, (P.), B., 932. and Wagner, H. P., Britannia l refinery, Northfleet, Kent, B., 924. Britannia lead

Waterman, C. N., and Amer. Smelting & Refining Co., recovery of tin [from bearing metals], (P.), B., 800.

Weis, G. H., and Amer. Smelting & Refining Co., treating copper anode mud, (P.), B., 253.

Betti, M., regulation of vital phenomena by traces of substances, A., III, 348.

Bettinelli, G. See Semerano, G.

Bettini, T. M., productivity and nutritive value of a maremma (fen) pasture cut monthly, B., 184.

Betts, R. L., and Hammett, L. P., kinetic study of the ammonolysis of phenylacetic esters in methanol solution, A., I,

Betz, H. See Günther-Schnlze, A.

Betz, P., economic use of brown-coal briquettes in industry, B., 1292.

Beuchelt, H. See Bredereck, H.

Beuerlein, K., oils for the machining

of free-cutting light-metal alloys, B., 687.

Bengen, E. van, tests with the selenium

toning bath, B., 499.

Beuschlein, W. L. See Conrad, F. H.

Beutel, E., and Kutzelnigg, A., brightly fluorescent zinc oxido [obtained] by partial decomposition of the basic carbonate, A., I, 472. Blooming of resin films, B., 1085.

Beutelspacher, H. See Mitscherlich, E. A. Bewersdorf, O., anomalous intensities in the band system $2p^1\Sigma_a \rightarrow 1s^1\Sigma_g$ ($v'=3 \rightarrow v''=0$ to 11) of the HD molecule, A., I, 53.

Bewick, H. L. See Stewart, J. K. Bewley, W. F. See Oyler, E.

Bewsher, J. N., design of jacketed pans of cast metal, B., 688. Construction of riveted jacketed pans, B., 852. Welded jacketed pans. I. and II., B., 1283, 1352

Beyaert, M., determination of electric dipole moment of the two tautomeric forms of ethyl acetoacetate, A., I, 601.

Beyer, A., cleaning, wetting, and dispersing agents and their production and use, (P.), B., 1313.

Beyer, A. C., effect of organic load on chloroamine sterilisation [of water], B., 625.

Beyer, E., heat-insulating materials and their use, B., 195.

Beyer, H., Friedel-Crafts reaction of lact-I. Synthesis of aromatically substituted acids from δ-chloro-yvalerolactone. II. Aromatic substituted fatty acids from δ-chloro-yvalerolactone, A., II, 291, 377. See also Lenehs, H.

Beyer, H. G. See Dunning, J. R., and Powers, P. N.

Beyer, K., material used in construction of [high-pressure steam] pipe-lines, B., 1286. Beyer, P. J., purification of vegetable oils

in order to convert them into lubricating oils, (P.), B., 367.

Beyer, R., heat-resisting products, (P.), B., 97. Marble, (P.), B., 349. Building materials, (P.), B., 349. Caoutchouc-like material, (P.), B., 469.

Beyerlein, F. See Fries, K.

Beyers, E., factors which influence the rates of solution of gold and silver in cyanide solutions, B., 246.

Beyerstedt, F., and McElvain, S. M., ethyl orthohalogenoacetates and their reaction with zinc and magnesium, A., II, 366. Beyl, H. See Dieterle, H.

Beynon, J. H., Heilbron, I. M., and Spring, F. S., novel interrelationship in the triterpene group, A., II, 68. Sterol group. XXIX. Constitution of isomeric ethers of cholesterol, A., II, 190. Characterisation of basseol, a tetracyclic triterpene alcohol, and its isomerisation to β -amyrenol, A., II, 346. See also Hinkel, L. E.

Beynon, Le G. See Union Oil Co. of California.

Beynum, J. van, fodder ensilage, B., 977.

Beyrodt, A. See Brass, K.

Beythien, A., pectin problem and food industries, B., 283. Apparatus and appliances of the food industry, B., 837. Poisonous and non-poisonous pigments, B., 1237.

Bezant, R. See Brit. Celanese. Bezinger, E. See Kiesel, A. Bezssonoff, N., nature and properties of the dienolio group of vitamin-C, A., II,

Nordmann, J., and Reiss, P., avitaminosis-C and the platinum potential of the aqueous humour and crystallin; influence of the basal diet, A., III, 104. and Sacrez, R., antiscorbutic action of monomethylvitamin-C, A., III, 154.

and Woloszyn, M., duality of the reversibly oxidised forms of vitamin-C and the polarisation of its dienol group, A., II, 442. Peculiarities of oxidation of vitamin-C, A., III, 155. Duality of oxidised forms and polarisation of vitamin-C indicated by the two reversible reactions with phosphomolybdic acid, A., III, 232. Effect of anions on oxidation of vitamin-C, A.,

III, 364. and Woloszyn, V., determination of vitamin-C, A., III, 155.

See also Rohmer, P.
Bezugli, D. V., obtaining sulphur from dissociation of gases by the contact oxidising method, B., 905.

and Kutzakov, F. M., Claus process [of sulphur recovery], B., 341. Catalytic oxidation of hydrogen sulphide by active charcoal, B., 541.

Litovischenko, D. M., and Tokar, P. T., precipitated sulphur from industrial waste products (sodium sulphite), B., I046.

Bezzabotnikova, A. P. Sce Schalfeev, V. M.

Bhabha, H. J., negative protons in cosmic radiations, A., I, 213. [Suggested] experimental test of proton-neutron exchange interaction, A., I, 440.

and Heitler, W., passage of fast electrons and theory of cosmic showers, A., I, 440.

Bhagavantam, S., vibrations of the ethylene

molecule, A., I, 113. and Rao, A. V., Raman spectrum of benzene vapour, A., I, 113, 168.

Bhagvat, K., relative digestibility of caseins in their artificial and natural environments, A., III, 120. Non-protein-nitrogen of milk, A., III, 120. Crystalline globulin from P. aconitifolius, Jacq., A., III, 333. Proteins of Indian food stuffs. X. In-vitro digestion of globulins from aconite bean (P. aconitifolius, Jacq.) and Bengal gram (Cicer arietinium, L.), A., III, **368.**

and Sreenivasaya, M., relative digestibility of caseins in their artificial and

natural environments, A., III, 17.
Bhargava, P. N., and Giri, K. V., detection of cereal flours separately and in mixtures by the "agar-plate" method, B., 608.

See also Giri, K. V.

Bhaskaran, T. R., economy of carbon during fixation of nitrogen by Azoto-bacter chroococcum, A., III, 146. Mechanism of non-symbiotic nitrogen fixation in soil, B., 819.

Bhatia, V. S. See Hamid, M. A. Bhatnagar, H. C., Chopra, N. N., Narang, K. S., and Ray, J. N., bases of physio-

logical interest, A., II, 455.

Bhatnagar, S. S., phagocytosis of Eberthella typhosa in relation to its antigenic structure and to antibody components of the sensitising system, A., III, 115,

Kapur, A. N., and Pnri, M. L., adsorptive properties of synthetic resins, A., I, 234.

Kapur, P. L., and Kapnr, A. N., influence of magnetic field on adsorption, A., I,

Kapur, P. L., and Luthra, R. K., mechanism of activation process of carbon, A.,

Kapur, P. L., and Rajpal, M. D., colloid structure and infra-red absorption spectra, A., I, 78.

Lessheim, H., and Khanna, M. L., ground state of the Se₂ molecule, A., I, 504, 589.

and Nevgi, M. B., diamagnetism of mercury, A., I, 556. Verma, M. R., and Anwar-ul-Haq, M.,

particle size and magnetic susceptibility, A., I, 121.

See also Felix, A., and Steel Bros. & Co. Bhattacharji, B. C., quinine in malaria, A.,

Bhattacharya, R., extraction of hard lao resin by means of aqueous solutions, B., 943. Modification of lac with higher fatty acids and their mixed glycerol esters. I., B., 1085.

and Gidvani, B., constitution of shellac, B., 1237.

Bhattacharyya, G. N., Indian vegetable oils. III. Viscosity and its variation with temperature. IV. Absorption of air, B., 464, 806.

Bhattacharyya, P. B., physico-chemicaI properties of electro-dialysed gels of silica, alumina, and ferric hydroxide, and their mixtures. III. Cataphoretic velocity and $p_{\rm H}$, A., I, 461. and Ganguli, K., electrodialysed gels of

silica, alumina, ferrie hydroxide, and their mixtures. II. Moisture retention capacity of the gels saturated with

different cations, A., I, S1.

Bhattacharyya, S. K. See Ghosh, J. C.

Bhawalkar, D. R., maximum in secondary electron emission from metals, A., I, 488. Bialas, T., crystallographic constants of

benzylideneketopinene, A., I, 289. Bialaszewicz, K., and Kupfer, C., mineral composition of muscles of marine animals, A., III, 197.

Bialobrzeski, M. C., ionisation of dielectric liquids; application to cosmic rays, A., I, 277.

Bialoglowski, J. See Cameron, S. H. Biasotti, A., Deulofeu, V., and Mendive, J. R., hypoglycemic action of histone insulinate, A., III, 102.

Sec also Houssay, B. A. Biastoch, K. Seo Ulich, H.

Biaudet, G., gas producer consuming wood and other ligneous materials, (P.), B., 112. Bibb, C. H., and Newport Industries, process of isomerising methylchavicol to anethole], (P.), B., 1024. Process of refining anethole, (P.), B., 1024. Distillation of terpineol, (P.), B., 1270. Conversion of pine oil into useful products, (P.), B., 1273.

Bibber, L. C. Sco Ellinger, G. A.

Biber, V., and Barskaja, F., iodometric determination of perchlorates, and comparison of methods for their determination, A., I, 424. Biberhall, A. V. Sco Vechsler, V. I.

Biberstein, H., production of fibromatous growths by parathyroid injections, A., III, 492.

Bibischev, V. P. See Makarov-Semljanski, J.

Bichowsky, F. von, and Krebs Pigment & Color Corp., purification of titanium

suboxide materials, (P.), B., 343. Bichowsky, F. R., and Gen. Motors Corp., self-propelling fire-extinguishing charge containing a double halogen hydrocarbon compound, (P.), B., 97. [Solid] absorbent for refrigerants, (P.), B., 1145.

See also Rosett, W.

Bick, M., determination of proteins in solution, A., III, 108.

Bickel, A., and Gerez, L., metabolic mechanism and nutrition in relation to the systematic classification of man as herbivorous, carnivorous, or omnivorous, A., III, 61.

Bickel, C. L., action of organometallic compounds on a-oxido-ketones, A., II, 154.

Bickel, H. Sce Bleyer, B.
Bickford, C. F., and Schoetzow, R. E.,
determination of phenolphthalein in
mineral oil—agar emulsions, B., 496. Assay of cysteine hydrochloride, B., 1130.

Bickford, W. G. See Brown, F. E. Bicknell, J. A., effect of titanium dioxide on sizing of paper, B., 126. Bidder, H. von. See Rupe, H.

Biddle, S. B., and Klein, A., hydrometric determination of the fineness of Portland-puzzuolana cements, B., 675.

Biddles, W. J. See Lovell, A. Biddulph, H. W. See Courtaulds, Ltd. Bidwell, E. H. See Turner, K. B. Biebel, J. P. See Withrow, R. B.

Bieber, A., proteins of milk at different periods of lactation, A., III, 201. Protein fractions, casein and soluble albumin, in human milk: effect of fat on casein precipitation, A., III, 297.

Biebl, R., action of a-rays on protoplasm

and chloroplasts, A., III, 157.

Biedenkopf, H., [characteristics of] human blood.

V. Determination of hæmoglobin, erythrocyte count and dimensions, and hamoglobin content per ervthrocyte and per μ^2 of erythrocyte surface in old persons, A., III, 2.

Biehler, W. See Engeland, R.

Biel, W., determination of morphine in simple tincture of opium, B., 840.

Bieligk, O., correct procedure for testing water-permeability of concrete, B., 554. Bieljansky, F. M. See Rubentschik, L. Bielschowsky, F. See Jimenez Diaz, C.

Bien, C. W. See Tung, C. L.

Bienenstock, M., recovery of pure germinal substance from seed kernels, (P.), B., 185.

Csáki, L., Pless, J., Sági, A., and Sági, E., gluten-like product, (P.), B., 495. Bierbaum, H. E., and Gen. Salt Co.,

recovery of halides [iodine], (P.), B., 669. Bierbrauer, E., Austrian coals in the Grout coalification diagram, B., 101.

and Hönig, F., deduction of state of subdivision of solid materials, B., 508. Bierett, G., notch-sensitivity of cast iron, B., 350.

Bierhalter, W., cut-back bitumen, B., 1155. Bierich, R., and Lang, A., potential determinations in tumour tissue, A., III, 12. Bierling, F., artificial stone plates, etc.,

(P.), B., 1346. Bierly, G. M., laundry starch, (P.), B., 277. Biermasz, T. See De Haas, W. J.

Bierry, H., importance of the determination of protein-bound sugar in fractionation and identification of bloodproteins, A., III, 164. Protein-bound sugar and blood-proteins in normal and pathological conditions, A., III, 371.

and Gouzon, B., fluorescence spectrum of a pigment isolated from Holothuria. A., III, 120. Extraction and spectroscopic detection of æstriol in urine of pregnancy, A., III, 150.

Gouzon, B., and Magnan, C., free and protein bound glycogen in liver, A., III, 7. Inanition and carbohydrate reserves, A., III, 19. Variation in the glycogen content of edible oysters, A., III, 384.

Biesalski, E., and Wacker, A., contact candles. II. Gas reactions with contact candles, especially determination by gas analysis of nitrous oxide, nitric oxide, and methane with palladium, platinum, and rhodium, A., I, 325.

See also Kahl, G. Biesel, P., production of coal powder by froth flotation, (P.), B., 409.

Biéth, T. C., cyclone apparatus for separating solid particles from gases, (P.), B., 10Ó.

Bifano, M., differences in content of unsaponifiable matter of the oil of tunny fish from various regions, B., 586.

Biffl, C., testing of hydraulic binders by means of mixtures, B., 1208.

Bigalli, D. See Canneri, G. Bigelow, L. A. See Calfee, J. D., and Miller, W. T., jun.

Biggs, B. S., and Weller, J. F., chemical constitution of a bituminous coal as revealed by its hydrogenation products,

Biggs, H. C., refractoriness-under-load test, B., 1052.

Biggs, L. R. See Gen. Electric Co.

Bihlmaier, K., identification of gold; identification of platinum and palladium, and differentiation of alloys of platinum, palladium, and white gold from base-metal alloys resembling platinum, B., 571.

See also Raub, E.

Billmann, E., and Jensen, K. A., thetines and selenetines, A., II, 274. Phosphetines and arsenetines, A., II, 282.

Jensen, K. A., and Jensen, H. B., betaines. IV. Mechanism of racemisation of salts of ethyl propiobetainate, A., II, 280.

Bijkerk, L. Sco Jaeger, F. M.

Bijl, A., thermal properties of helium, hydrogen, and deuterium, A., I, 21. Properties of the condensed phases of helium and hydrogen, A., I, 294. See also Keesom, W. H., and Michels, A.

Bijvoet, J. M., chemical constitution and crystal structure, especially with intermetallic compounds, A., 1, 171.

See also MacGillavry, C. H.

Bikerman, J. J., transport of ions in presence of colloids, A., I, 310. Surface tension and vapour tension of dipolar liquids, A., I, 349. Bilek, F., pigments and vitamin content of

yolk of egg, A., III, 296. Bilenkin, A. M. See Gertzikov, G. A. Bilger, F., Halden, W., Mayer-Pitsch, E., and Postemer, M., fat and lipin meta-bolism of yeast. V., A., III, 314. Bilhuber, Inc., E. See Schmidt, K. F.

Bilinin, V., application of electron lamps to determination of p_H by means of a glass electrode, A., I, 99.

Bilke, W. See Hofmann, U.

Billiet, V., uranotile and sklodowskite, A., I, 52.

Billig, K., calculation of b.p., A., I, 123. Billimoria, M. C., extracting soluble nitrogen from leaves with acid sap, A., III, 191.

See also Pearsall, W. H.

Billing, C., enamel, polish, varnish, cement, flexible glass, and brick or tile, (P.), B.,

Billing, W. M. See Hercules Powder Co.
Billings, H. J., and Little, Inc., A. D.,
stabilised acid latex, (P.), B., 474. Underwater cement and mortar, (P.), B., 677.

Billings, L. C., selection of coagulants [in water purification], B., 297.

Billington, P. S. See Chidester, G. H. Billner, K. P., treatment of [laid] concrete,

(P.), B., 244.
Bills, C. E., new forms and sources of

vitamin-D, A., III, 155.

Massengale, O. N., Imboden, M., and
Hall, Helen, multiple nature of vit-

amin-D of fish oils, A., III, 496. See also Massengale, O. N.

Biloschita, H. See Petrovski, J. Bilotti, L. See Agosta, G.

Bilton, J. A., and Linstead, R. P., phthalocyanines. X. Experiments in the pyrrole, isooxazole, pyridazine, fnran, and triazole series, A., II. 352.

Biltz, H., absorption of light and tautomerism of uric acids, A., II, 78.

Biltz, W., space chemistry of solid materials, A., I, 399. Heat of formation of intermetallic compounds, A., 1, 455. Iridium and rhodium selenides and tellurides, A., 1, 528. Poisonous action of colloidal

clements, A., III, 267.

Laar, J., Ehrlich, P., and Meisel, K.,
affinity. LXXIV. Iridium sulphides, A., I, 528.

and Weibke, F. [with Quadt, U. von, and Ehrhorn, H. J.], stero-chemical compression of sodium, potassium, and rubidium by combination with gold,

A., I, 356. See also Ehrhorn, H. J., and Quadt, U. von.

Binaghi, R., humification of fossil fuels, B., 6. Thermal gradient of coking and pyrogenation under reduced pressure of national [Italian] fuels, B., 7.

and Guerrera, E. M., high-temperature distillation of combustible national [Italian] fossil coals, B., 7.

Binder, H. Sco Wegler, R.

Binder, O., green basic copper carbonates, A., I, 371.

Sce also Willaume, F.

Bindseil, A. W. See Dane, (Frl.) E.

Binet, \hat{L} , and Burstein, \hat{M} , metabolism of nitrogen and the lungs, A., III,

Jaulmes, C., and Weller, G., antitoxic properties of glutathione; tetanus toxin, A., III, 338. Cobra venom, A., III, 454.

and Marek, J., carbohydrate metabolism in fungal poisoning (Amanita phalloides), A., III, 95.

Verne, J., and Parrot, J. L., influence of fasting on histophysiology of the pulmonary lipins, A., III, 119. Histophysiology of pulmonary lipins; digestive cycle of pulmonary lipins in the dog; fatty lungs in poisoning, A., III, 295, 352.

and Weller, G., glutathione in tissues of the guinea-pig during experimental ictero-hæmorrhagic spirochætosis, A., III, 90.

Weller, G., and Goudard, H., glutathione in [pathologically] altered liver, A., III, 198.

See also Gosset, A.

Bing, F. C. See Free, A. H. Bing, J., proteinuria; "albuminuria," A., Ill, 203.

Bingham, E. C., improved chemical [laboratory] hood, A., I, 537.

Bingham, G. See Brit. Celanese. Binkley, S. B., and Hamilton, C. S., in-

arsenated phenoxyethanols, A., II, 475. Binks, W. See Kaye, G. W. C.

Binnie, A. M., and Poole, E. G. C., theory of the single-pass cross-flow heat interchanger, B., 851.

Binnington, D. S., reaction micro-apparatus, A., I, 481.

and Geddes, W. F., relative loss in pigment content of durum wheat, semolina, and spaghetti stored under various conditions, B., 608. Relative macaroni-making quality of durum wheat varieties, B., 831.

Binns, V., and Bairstow, S., combustion control by means of electrical meters, B.,

Binopoulos, X. See Andreadis, TBinova, E. S. See Raigorodska, R. L. Binsacca, W. A., milling methods at the concentrator of the Fresnillo Co., B., 47. Binz, A., chemical investigation and

medicinal application, A., III, 478. See also Schickh, O. von.

Bio Reduction Corporation of New York. See Boeder, G. H.

Biocca, E., crystallisation of carboxyhæmoglobin from dried blood of various animal species and its application to

forensic medicine, A., III, 289.
Biquard, (Mlle.) D., Raman spectrum of some ketones; influence of cyclisation,

A., I, 497.

Biqnard, P. See Lucas, R.

Birch, F., effect of pressure on modulus of rigidity of several metals and glasses, B., 573.

and Clark, H., thermal conductivity of rocks, A., I, 479.

Birch, H. F., Flynn, D. G., and Robertson, A., usnic acid. IV. Synthesis of 4:6dimethoxy-3:5-dimethylcoumarone-2acetic acid, A., II, 70.

Robertson, A., and Subramaniam, T. S., synthesis of rotenone and its derivatives. X. 6:7-Dimethoxychroman-4-one, A., II, 70.

Birch, O. G. See Vosburgh, W. C. Birch, R. E. See Harvey, F. A.

Birch, S. F., Pim, F. B., and Tait, T., high-anti-knock fuels from lower olefines, B., 11.

Birckenbach, L., and Gonbeau, J., [thiocyanogen and its addition to unsaturated fatty acids], A., II, 90.

Bird, A. H., hop drying by gas at Hawkhurst, B., 277.

Bird, C. D., and Ritter, G. J., white oak cellulose, A., II, 277.

Bird, C. L., dry cleaning: methods of increasing the detergent effect, B., 130. Bird, E. W., acids in butter: distribution between water and fat phases, B.,

1399. Causes of tallowy flavour in strawberry ice cream, B., 1400. and Breazeale, D. F., determination of

fat in buttermilk with three Minnesota reagents, B., 490.

Bird, H. R., Kline, O. L., Elvehjem, C. A., and Hart, E. B., distribution and properties of the anti-gizzard-crosion factor required by chicks, A., III, 407. See also Kline, O. L., and Peterson, W. H.

Bird, H. W., and Coates Bros. & Co., roller mills for pulverulent and similar materials, (P.), B., 740.

Bird, J. C., new suppository base, B., 1130.

and Wyeth & Bro., Inc., J., castor oil [medicinal] preparation, (P.), B., 88. See also Standard Oil Development Co.

Bird Machine Co., centrifugal separation of solids from fluid suspension. (P.), B., 99. Separating and grading of solid particles from suspensions in liquids by centrifugal means, (P.), B., 99. Conditioning of freshly quarried clay, (P.), B., 347.

Birge, R. T., fundamental atomic constants, A., I, 491.

Birjukov, D. A., human mucins, A., III, 9. Birkby, H. S. See Standard-I.G. Co.

Birkhimer, E. R., and Atlantic Refining Co., hydrocarbon oil treatment, (P.), B.,

Birkholz, H. E., and Amer. Air Filter Co., [domestic] air or gas filter unit, (P.),

Birkinshaw, J. H., and Raistrick, H., biochemistry of micro-organisms. LII. Isolation, properties, and constitution of terrestric acid (ethylcarolic acid), a meta-bolic product of *Penicillium terrestre*, Jensen, A., III, 71.

Birkner, R. See Rollett, A. Birks, F. M. See Gas Light & Coke Co. Birman, J. N. See Beljaev, P. P.

Birmingham Electric Furnaces, Ltd., and Lobley, A. G., crematory furnaces, (P.), B., 300.

Lobley, A. G., and Robiette, A. G. E., furnaces or apparatus for heat treatment of metals, (P.), B., 53. Brightannealing of metallic strip or sheet, (P.), B., 1229.

Lobley, A. G., and Tanner, T. G., electrical furnaces for heat treatment of

metals, (P.), B., 147.

and Robiette, A. G. E., heat treatment of metals and alloys [e.g., bright annealing of brass], (P.), B., 250. Furnaces for annealing stainless-steel and other metal strip, (P.), B., 799. Melting and casting of metals, (P.), B., 1224.

Birnie, F. R., apparatus for preservation of mushrooms and other vegetables, and other perishable commodities, (P.), B.,

1130.

Birnthaler, W., and Lange, E., heats of dilution of some salts in D_2O and H_2O solutions at 25°, A., I, 518.

Biron, A., and Nalbandjan, A., lower limit

of reaction between hydrogen and oxy-

gen, A., I, 246.

Birosel, D. M., naturally occurring linoleic acid in cottonseed and soya-bean oils and the regenerated linoleic acid from a-linoleic acid tetrabromide of these oils, A., II, 227. Birrell, T. L., casein plastics, B., 943.

Birrer, A. Sec Adam, F.

Birtles, R. H., and Hampson, G. C., steric influences on phenomenon of mesomerism, A., II, 92.

Birtley Co., Ltd. See Appleyard, K. C. Bisang, L., [determination of] radiation from the combustion chamber of highspeed Diesel and Otto engines, B.,

Bisbey, B., and Cover, S., relation between the $p_{\rm H}$ of contents of the intestinal tract and deposition of calcium in bones of rats, A., III, 458.

Cover, S., Appleby, V., and Weis, A., vitamin-A and -D contents of light, medium, and dark egg-yolks, A., III, 493.

Bischoff, F., physical and physiological properties of the system insulin-tannic acid, A., III, 186. Histone combinations of the protein hormones, A., III, 279.

and Elliot, A. H., callierein, A., III, 93. and Long, M. L., chemical studies on prolan (from urine of pregnancy), A., III, 40.

Long, M. L., and Maxwell, L. C., influence of caloric intake on growth of sarcoma 180, A., III, 12.

Bischoff, G. See Micheel, F.

Biscoe, J. See Wyckoff, R. W. G. Bishop, D. L. See Wells, L. S.

Bishop, F. L., laminated glass, (P.), B., 346. Bishop, J., manufacture and economics of concentrated gas liquor as applied to coke-oven by product recovery plant, B.,

Bishop, L. R., importance of proteins in brewing, B., 1258.

Biske, V., naphthenic acids from crude oil, B., 749.

Biskind, G. R. See Glick, D.

Bissell, D. W. See Nat. Aniline & Chem. Co. Bissell, W. T., and Journal Box Servicing Corp., foam elimination in reclaiming used oils, (P.), B., 1167.

Bisson, C. S., and Dye, W. B., white from crude beeswax, (P.), B., 588.

Jones, H. A., and Allinger, H. W.,

determining changes in stored peas by use of a reference element, B., 614.

Bistritzka, S. J. See Teletov, I. S. Bistrov, G. N. See Liberman, L. J. Bistrov, S. P. See Drozdov, S. S., and

Smorodincev, I. A.

Bistrov, S. V. See Kovda, V. A. Biswas, B. N., derivation of the latent heat equation from principles of dilute solutions, A., I, 606. Biswas, N. N. See Dhar, N. R.

Bitsch. See Mohr.

Bitschkov, M. K., and Ivanova, A. I., determination of silicic acid in copper smelting slags, B., 448.

Bitskei, J., determination of carbonate hardness [in water], B., 397.

Bittel, H. See Embirikos, N. Bitter, F. See Tarasov, L. P. Bittera, J. See Erdos, S.

Bivort, H. J., electrically heated glass-tank

furnaces, (P.), B., 346. Bixby, W. F. See Hauser, E. A.

Bizard, G. See Lambert, O., and Polonov-

Bizet, E., and Raymond-Hamet, opposite effects of two alkaloids of the same vegetable drug, A., Ill, 350.

Bizette, H., and Scherer, M., anomalies in the magnetic rotatory dispersion of sulphuric acid solutions of tellurium, A., I, 445.

and Tsaï, B., magnetic rotatory power of compressed and liquefied nitric oxide, A., I, 397. Magneto-optical properties of compressed gases: magnetic bi-refringence of nitric oxide; magnetic rotatory power of helium, A., I, 445.

Bizov, L. A., variational graph paper for determination of distribution [of results]

of analysis, A., I, 268.
Bizzell, J. A. See Lyon, T. L.
Bjerg, N. H., and Dick Co., A. B., [cellulose] adhesive, (P.), B., 1248.

Bjerge, T., radioactive neon, A., I, 340. Bjerre, S., effect of silage on quality of

dairy products, B., 388.
Bjerregaard, A. P., and Gray Processes Corp., drying oil and varnish from hydrocarbon material, (P.), B., 698.

Bjørlykke, H., granite pegmatites of Southern Norway, A., I, 483.

Björnståhl, Y., and Snellman, K. O., influence of an electric field on viscosity of pure liquids and colloidal solutions, A., I, 232.

Bjorkman, E. B., porous light-weight aggregate from liquid slag, (P.), B., 349. Foamed slag from liquid [blast-furnace] slag, (P.), B., 454. Granulate of blastfurnace slag for manufacture of white cement and plaster, (P.), B., 1070.

Blacet, F. E., and Volman, D. H., micro-analysis of gases. IV. Nitrous oxide and methane, A., I, 148.

Young, W. G., and Roof, J. G., absorption spectra. I. Crotonaldehyde and acraldehyde, A., I, 280. See also Leighton, P. A.

Blacher, C., determination of dust content of coal consignments, B., 7.

Blacher, G. S., problems of phosphate analysis; rapid determination of assimilable phosphoric acid in superphosphates, B., 1043.

Black, A. See Greene, R. D., and Kahlenberg, O.J.

Black, A. G., and Evans, Percy, recovery of ammonium compounds from ammoniacal liquors, etc., and manufacture of a grease solvent, (P.), B., 113.

Black, C. K. See Dn Pont de Nemours & Co., E. I.

Black, E. C. See Irving, L.

Black, J. V. See Gillies, J. F.

Black, L. A. See Bartram, M. T. Black, L. V. See Amer. Securit Co.

Black, W. C., dyeing process, (P.), B., 1041.

Black, W. H., and Mathews, O. R., comparison of feeds for wintering steers in the northern Great Plains, B., 1264.

and Trowbridge, E. A., comparison of feeds for fattening_beef calves before and after weaning, B., 1264.

Blackberg, S. N. See Hrubetz, M. C. Blackburn, W. H. See Dent, F. J.

Blackett, P. M. S., energy-range relations for cosmic-ray particles, A., I, 390. Further measurements of the cosmicray energy spectrum, A., I, 390. Cosmic radiation, A., I, 491.

and Wilson, J. G., energy loss of cosmic ray particles in metal plates, A., I, 440. Blackie, A., production and utilisation of domestic coke; devices for enabling refractory cokes to be burned in ordinary open domestic grates, B., 103.

Blackie, J. J., alkaloids of Senecio, A., II, 127.

See also Barger, G.

Blackman, M., absorption of polar crystals in the infra-red, A., I, 61. Properties of vibrational spectrum of a lattice, A., I, 224. Effect of temperature on the reflexion of X-rays, A., I, 436. Vibrational spectrum of a three-dimensional lattice, Â., I, 452.

Blackman, P., burner with adjustable flame spreader, A., I, 478.

Blackmond, W. C., and Reynolds, J. H., mixing machine, (P.), B., 98.

Blackshaw, H., brenthol mixtures: calculation of quantities, B., 1326. See also Imperial Chem. Industries.

Blacktin, S. C., electrorotor dust and smoke meter, B., 190. Instrument for both counting and weighing particles of dusts, smokes, and other dispersions, B., 989. Spontaneous electrical charge of fine coal dust, B., 1151.

Blackwell, H. A., and Turner, W. L., separating magnesium, beryllium, and similar metals which sublime from their ores and compounds, (P.), B., 1228

Blackwood, J. H., Morris, S., and Wright, N. C., nutritive value of raw and pasteurised milk for calves; assimilation and retention of nitrogen, phosphorus, and calcium, B., 180.

and Wishart, G. M., effect of salivary activity on composition of bovine blood, A., III, 137.

See also Aylward, F. X.

Blagg, J. C. L., and Murphy, G. M., rate of thermal decomposition of deuterium iodide, A., I, 34.

Blagovestschenskaja, N. S. See Poljak, A. M.

Blagovestschenski, A. V., differences between similar enzymes in relation to their origin, A., III, 220.

and Jurgenson, M. P., changes of leucosin, gliadin, and glutenin under action of flour and yeast proteinases, B., 385.

Blagovestschenski, N. See Troitzki, M. Blagovestschenski, V. See Kirsanov, A. Bláha, and Láska, bromometric determination of nitrogen in food analysis, B., 494.

Blaikie, K. G., and Crozier, R. N., polymerisation of vinyl acetate, B., 60.

Blair, A. W., and Prince, A. L., manganese in New Jersey soils, B., 163. Effects of long-continued manure, fertiliser, and lime treatment on composition of cropped soils, B., 271.
Blair, E. M. M., boric acid as selective

bacteriostatic agent, A., III, 37.

Blair, G. W. S., micro-viscosimeter for non-Newtonian liquids, A., I, 101, 202. and Potel, P., physical significance of properties measured by the Chopin extensimeter for testing flour doughs,

See also Halton, P., and Schofield, R. K. Blair, I. D., foot-rot disease of wheat, B., 603.

Blair, M. W., waste in drying [clay products], B., 1205.

Blaisemont, L. A. C., use of phosphatic fertilisers in cultivation of sugar cane and bananas, B., 956.

Blaisse, B. Sce Michels, A.
Blake, J. T., and Bruce, P. L., vulcanisation of rubber. VII. Unsaturation of rubber vulcanised with nitro-compounds and benzoyl peroxide, B., 1090.

Blake, M. A., and Davidson, O. W., degree of maturity of peaches at harvest in relation to flesh firmness, keeping quality, and edible texture, B., 273.

Blakeley, W. F., and Blakeley, Sons, & Co., F., apparatus for automatically controlling the calorific value of gas mixtures, (P.), B., 1009.

Blakeley, Sons, & Co., Ltd., F. See Blakeley, W. F.

Blakemore, F., Nicholson, J. A., and Stewart, J., effects of a high manganese content in diet of animals with special reference to lactation tetany, A., Ill. 214.

Blakey, W., testing of urea plastics, B., 368.

Blalock, A., and Mason, M. F., blood-flow and gaseous metabolism of the liver of unanæsthetised dogs, A., III, 258.

See also Levy, S. E., and Mason, M. F. Blanc, E. C., laws of crushing, and present state of knowledge, B., 399. Laws of crushing and grinding, B., 628.

and Fleming, H., bar mill for pulverising wet coke, B., 861.

Blancato, M., materials for use in pre-paring emulsions for treatment of textile materials, (P.), B., 1327.

Blanchard, A. A. See Coleman, G. W. Blanchard, A. F., and Tryon Viscostor Corp., comparative viscosity device, (P.), B., 100.

Blanchard, E. R. Sec Ahlberg, J. E., and Lord, R. C., jun.

Blanchard, K. C. See Lava, V. G., and Machlis, S.

Blanchard, L., increase in blood-lactic acid in the horse due to adrenaline, A., III, Blanchard, M. H. See Cohn, E. J. Blanck, E., Schorstein, H., and Themlitz, R., influence of calcium silicate and carbonate on the utilisation [by plants] of different phosphate fertilisers, B., 479.

Blank, E. W., separation of magnetic particles under the microscope, A., I, 267. Mol. wt. of racemic acid, A., II, 398.

Blanke, E. See Haberland, G.

Blanke, M., prevention of coal-dust explosions, B., 309.

Bias, L., war gases, B., 190.

Blaschko, H., Richter, D., and Schlossmann, H., inactivation of adrenaline, A., III, 490.

Sec also Richter, D.

Blatch, F. H. See Menzies, W. C. Blatherick, N. R., and Medlar, E. M., chronic nephritis in rats fed with highprotein diets, A., III, 257. Sec also Larson, H. W.

Blau, H. H. See Carborundum Co. Blau, J., determination of lyophiles in

solid substances, B., 628.

Blau, M., and Wambacher, II., disintegration processes by cosmic rays with simultaneous emission of several heavy particles, A., I, 594. Observations on K. Weber's theory of desensitisation, B., 89.

Blauch, M. B. See Vennesland, B.

Blaufuss, G., semi-continuous, self-cleaning filter, (P.), B., 633.

Blaw-Knox Co. See Chandler, W. P., jun.,

and McCrery, H. E.

Blayden, H. E., Noble, W., and Riley, H. L., influence of carbonising conditions on coke properties. I. Mechanical pressure, B., 1000. Experiments in a smallscale cupola, B., 1058.
Blaydes, G. W., preserving natural colour

of green plants, B., 378.

Blazsó, A., significance of fumaric acid for the respiration of animal tissues. III. Reduction of oxalacetic acid in embryonal tissue, A., III, 59.

Bleachers Association Ltd., Kershaw, W., and Whitelegg, C. J., treatment [finishing] of cellulosic materials, (P.), B., 900. Bleakney, H. H., soft spots on hardened

steel, B., 680.

Bleakney, W., Condon, E. U., and Smith, L. G., ionisation and dissociation of molecules by electron impact, A., I,

See also Hippie, J. A., jun., Sampson, M. B., Sherr, R., Smith, L. G., and Smith, P. T.

Blech, W., and Gregory, T. G., detergent composition, (P.), B., 1368.

Bledsoe, R. P., Stacy, S. V., and Skinner, J.J., cotton fertilisers for Georgia soils, B., 823.

See also Skinner, J.J.

Bless, A. A., effects of the length of X-ray waves on seeds, A., III, 286.

Bless, H. See Kanitz, H. R.

Blenderówna, E. See Lampe, W. Blenkinsop, G. W. See Boyd, E. M.

Bley, R. S., and North Amer. Rayon Corp., disilane-rayon, (P.), B., 127. Collulosic spinning solution containing aromatic silicon derivatives, (P.), B., 127. Siliconrayon, (P.), B., 127. Soft-Iustre rayon, (P.), B., 127. Cellulosic spinning solution containing aliphatic silicon compounds, (P.), B., 127. [Reinforced] ubber articles, (P.), B., 1379. Bleyer, B., Diemair, W., and Fischler, F. [with Arnold, F., and Bickel, H.], physiological importance in nutrition of methods of preparation of food-stuffs. III. Content of histone bases in unroasted plant products, A., III, 466.

Diemair, W., Fischler, F., Täufel, K. [with Arnold, F.], physiological importance in nutrition of methods of preparation of food-stuffs. II. Influence of reasting of various vegetables, B., 389.

Sec also Sichert, K.

Blezinger, T. See Goldstein, H.
Blicke, F. F., Oneto, J. F., and Webster,
G. L., diarsyls. IX. Tetra-3-amino-4hydroxyphenyldiarsyl, A., II, 312.

and Webster, G. L., arsinic acids, A., II, 219. Diarsyls. VIII. Amino and hydroxy-diarsyls, A., II, 267.

Blijdorp, P. A. See Pfeiffer, J. P.

Blin, H., lactose, B., 605.

Blinks, L. R., effects of ourrent flow on bioelectric potential. III. Nitella, A., III, 105. Electrical evidence on naturo and alterations of membranes in large plant cells, A., III, 407.

Blinov, I. F., explosiveness of ammonium nitrate-ammonium sulphate mixtures, B., 903. Explosiveness of potassium and sodium chlorates, B., 903.

Blinov, V. I., total radiation in explosions of mixtures of carbon monoxide and air, A., I, 195.

Blish, M. J., present status of "standard" A.A.C.C. baking test, B., 386. and Sandstedt, R. M., biocatalytic activ-

ators specific for yeast fermentation of

maltose, A., III, 271. Sandstedt, R. M., and Mecham, D. K., temperature effects in preparation of wheat amylases, B., 829. Action of wheat amylases on raw wheat starch, B., 1397.

See also Ackerson, C. W., and Sandstedt, R. M.

Bliss, L. A., and Linde Air Products Co., liquid-trapping device, (P.), B., 5.
Bliss, R. H., and Dodge, B. F., vapour-

phase hydration of ethylene, B., 211. Bliudov, A. P. See Rapoport, I. B.

Blix, G., micro-determination of glycerol in fat and phosphatides, B., 1365. Bloch, E. See Bloch, L.

Bloch, F., magnetic scattering of neutrons. II., A., I, 438.

and Nordsieck, A., radiation field of the electron, A., I, 492.

Bloch, (Mlle.) F., thio-acids, A., II, 418. Bloch, J., conversion of acids into stable colloids, (P.), B., 291.

Bloch, K., phosphatide acid of human tubercle bacilli, A., III, 36.

See also Riesser, O. Bloch, L., and Bloch, E., extreme ultraviolet spectrum of mercury, A., I, 2. Structure of the spectra Sb vi and Te vII, A., I, 157. Far ultra-violet spectra of sulphur and tellurium, A., I, 335. Extreme ultra-violet spec-

trum of antimony, A., I, 486. Bloch, E., and Felici, N., spark spectra of iodine in the extreme ultra-violet, A.,

I. 589. Bloch, E., and Herreng, P., absorption spectra of sulphur dioxide and hydrogen sulphide in the Schumann region, A., I, 7.

Kosse, J., and Necheles, H., clotting time of blood following administration of histidine, A., III, 453.

Bloch, (Mlle.) M., spectrum of Nova Lacertæ 1936, shortly after maximum brilliancy, A., I, 273.

See also Dufay, J. Bloch, O., and Kobosev, N. I., dependence of catalytic activity on amount of pro-

moter, \hat{A} , \hat{I} , 89. Bloch, \hat{O} . \hat{F} ., applications of photography to scientific and technical problems, B.,

Bloch, P. W., progestin content of blood, A., III, 40.

Blochin, M. A., separation of the characteristic from continuous X-ray spectrum, A., I, 201. Application of curved crystals to X-ray spectrum analysis, A., I, 259.

Blochin, N. N., gases in blood during muscular work. I., A., III, 369.

Blochinzev, D., theory of phosphorescence, A., I, 168. Theory of coloured crystals, A., I, 217.

Block, D. J., [dye] stripper, (P.), B., 1196. Block, L. P. See Simons, J. H. Block, R. J., neuroproteins. I. Amino-

acid composition of various mammalian brain proteins. II. Effect of age on amino-acid composition of human and mammalian brain proteins, A., III, 374, 416.

and Hubbell, R. B., vitamin-B complex; presence of a third factor, A., III, 494.

See also Brand, E.

Block, W. D. See Christman, A. A. Blodgett, E. C. See Keitt, G. W.

Blodgett, F. M., and Cowan, E. K., relative effects of calcium and acidity of soil on occurrence of potato scab, B., 712.

Mader, E. O., Burke, O. D., and Mc-Cormack, R. B., Bordeaux mixture with reduced amounts of lime as a potato spray, B., 171.

See also Mader, E. O., and Taylor, C. F. Blodgett, (Miss) K. B., built-up films of barium stearate, A., I, 612.

and Langmuir, I., built-up films of barium stearate and their optical properties, A., I, 458. Blöchliger, G. See Waser, E.

Blok, H. See Boerlage, G. D.

Blokker, P. C., diffusion of cathodically produced hydrogen and deuterium through iron, A., I, 84. Azide potential, A., I, 188.

Blom, A. V., tension-optical coefficient as a material constant, A., I, 515. Painting of wood, B., 369. Cracking of paint films, B., 590. Relations between structure and physical proplastics, B., 699. Treating linseed oil, B., 806.

and Schnyder, H., anti-rust coating agents containing chromium compounds, (P.), B., 472.

Blom, J., foam [on beer], B., 829.

and Braze, B., [action of] amylases and glucosidases [on glucosides], A., III, **430.**

Blondel, A., colour kinematography on lenticular films, (P.), B., 732.

Blondiau, L., and Soc. Anon. des Ciments de Thieu, cement, (P.), B., 676. Blood, H. L., possible acid seed soak for

control of bacterial canker of the tomato,

Blood, J. W., and Cranfield, H. T., determination of betaine in sugar-beet byproducts, B., 174. Bloom, W. Seo Kharasch, M. S.

Bloomer, R. O., occurrence of stilbite in the Border Conglomerate, near Culpepper, Virginia, A., I, 483.

Bloomfield, A. Leslie, theory of distillation as applied to essential oils. VII.—X., B., 287, 392.

Bloomfield, Arthur L., individual variations in susceptibility to dietary deficiency, A., III, 466.

See also French, L. R.

Bloor, W. R., effect of activity on the phospholipin and cholesterol content

of muscle, A., III, 345, and Snider, R. H., phospholipins as oxygen carriers, A., III, 295.

Blott, J. F. T. See Saal, R. N. J. Blount, A. L. See Union Oil Co. of California.

Blount, B. K., Chibnall, A. C., and El Mangouri, H. A., wax of white pine chermes, A., II, 398.

and Plant, S. G. P., reaction between anthranilic acid and cyclopentanone, A., II, 21I.

Bloxam, H. C. L. See Dunn, J. T.

Blue, R. W., and Hicks, J. F. G., jun.,

low-temperature studies. II. Comparison of platinum-rhodium resistance thermometers with the helium gas thermometer from 11° to 300° K., A., I, 634.

Blumel, E., accuracy of washing curves [for coal], B., 1151.

Blümner, E., carbonisation of coal, (P.), B., 643.

Blum, E., and Herzberg, G., ultra-violet absorption spectrum of diboranc, A., I, 165. and Verleger, H., geometrical structure

of the CH₃N₃ molecule, A., I, 598.

Blum, H. F., photodynamic hæmolysis.

II. Modes of inhibition, A., III, 453. Life, a photochemical steady state, A.,

Pace, N., and Garrett, R. L., photo-dynamic hæmolysis. I. Effect of dye concentration and temperature, A., III, 453

Blum, I. L., determination of paraffin wax

in crude oils, B., 107.
and Marinescu, M., mineral waxes
(ceresins) from Rumanian oils, B., 1298. and Sandnlescu, T., relationship between chemical constitution and properties of mineral oils for internal-combustion engines. I. Properties and causes of low value of Rumanian mineral lubricating oils. II. Attempts to make mineral lubricating oils from Rumanian crudes, B., 110.

Blum, L., polarity of buffering power in tissues of Potamogeton densus, L., A.,

Blum-Bergmann, O. See Bergmann, E. Blnma, R., world developments in pig ments, paints, and varnishes, B., 810. Glycero-phthalic resins in the varnish industry, B., 1088.

Bluman, A. See Lampe, W.

Blumberg, H. See Myers, R. J.
Blumenfeld, J., Mayer, M., and Krebs
Pigment & Color Corp., titanium pigments, (P.), B., 263.

Blumenthal, E., and Herbert, J. B. M., interchange reactions of oxygen. I Interchange of oxygen between water and potassium phosphate in solution, A., I, 474.

Blumenthal, F., Schultz, T., and Soc. Immobiliere 12 Industr. Anversoise, extraction of organic acids from dilute aqueous solutions, (P.), B., 1172.

Blumenthal, M. See Centnerszwer, M. Blunck, F. H. See Hurd, C. D. Blunden, H. See Butts, J. S., and Deuel,

H.J., jun. Blunk, H. See Prüss, M.

Bluschke, H. See Matossi, F.

Bluth, M., and Hanemann, H., influence of arsenic and copper on hardening of lead-antimony alloys, B., 572.

Blyth, C. E., bricks, slabs, etc., (P.), B.,

Blyth, J. S. S. See Greenwood, A. W.

Blyth, W. B., treatment of slimes on small gold mines of Southern Rhodesia, B., 571.

Boake, A., Roberts & Co., Ltd., and Revie, G. N., cereal substances for use in preparation of boverages, (P.), B., 285.

Boam, J. J., Cahn, R. S., and Stuart, A., identification of tephrosin and deguelin from different sources, A., II,

See also Cahn, R. S.

Boarts, R. M., Badger, W. L., and Meisenbnrg, S. J., temperature drops and liquid-film heat-transfer coefficients in vertical tubes, B., 1284.

Boas, F., ionic effects, catalase activity, and function of [plant] cells, A., III, 30. Boas, I. H., pulping of pines, B., 894.

Boas, W., calculation of torsional modulus of quasi-isotropic polycrystalline aggregates from single crystal constants, A., I, 228.

Boas-Traube, S., and Volmer, M., validity of Traube's rule for liquid-liquid interface, A., I, 300.

Boase, G. S. See Nelson, R. E.

Boatner, C. H. See Bachmann, W. E.

Bobal, $L_{\cdot \cdot}$, and Rammler, $E_{\cdot \cdot}$, combustion of pulverised brown coal with slagging

of ash, B., 1000. Bobko, E. V., indispensable elements for plants. I., B., 1250.
Naidina, O. G., and Jashnova, N. V.,

determining placement of fertilisers with aid of Aspergillus niger and A. oryzæ, B., 595.

Sivorotkin, G. S., and Filippov, A. I., indispensable elements for plants. II. Influence of boron on the development of plants growing in limed soils, B., 1250.

Bobrański, B., and Kochańska, L., pyridino-2':3':5:6-coumarin, A., II, 216.

Bobrov, P. A., thermal decomposition of wood with super-heated steam, B., 862. Bobrov, V. A., intermetallic compounds and phases of variable composition in ultra-light bimetals, B., 51.

Bobrovnik, D. P., origin of Don basin Tertiary siliceous sandstones, A., I, 206.

See also Budnikov, P. P.

Bobtelsky, Max, and Bobtelsky-Chajkin, (Mme.) L., influence of added catalysts on catalytic decomposition of hydrogen peroxide in presence of dichromate, A., I. 88.

Mordechai, and Bobtelsky-Bobtelsky, Chajkin, (Mme.) L., mixed catalytic effects in decomposition of hydrogen peroxide in presence of sodium tungstate, A., I, 36.

and Rappoport, (Mlle.) M., decomposition of hydrogen peroxide in presence of a cobalticitric complex as catalyst, A., I, 523.

Bobtelsky-Chajkin, (Mmc.) L. See Bobtelsky, Max, and Bobtelsky, Mordechai. Bocage, A. See Ramon, G. Boeciarelli, D. See Bernardini, G.

Boček, H., important data for production of hard cast iron, with special reference to hard-rolled cast iron, B., 558.

Bock, B. von. See Meerwein, H. Bock, F. See Windaus, A.

Bock, H. See Schneider, G. G.

Bock, K. A., changes in action of ovarian hormone and of the gonadotropic fraction of anterior pituitary effected by disturbance of the acid-base equilibrium, A., III, 229.

Bock, L. H., water-soluble cellulose ethers; preparation and theory of solubility,

B., 1187.

See also Powers, D. H.

Bockmühl, M., Ehrhart, G., and Winthrop Chem. Co., salts of tetrahydro-N-methylnicotinic acid methyl ester with aminosubstituted arsonic acids, (P.), B., 730.

Bodansky, A., determination of serum-inorganic phosphate and serum-phosphatase activity, A., III, 413. Non-osseous origins of serum phosphatase: the liver, A., III, 431.

Bodansky, M., and Duff, V. B., nitrogen and creatine metabolism in relation to environmental temperature and thyroid function, A., III, 210.

and Pilcher, J. F., clinical significance of the creatine reserve of the human

heart, A., III, 119.

Bodansky, O., are the phosphatases of bone, kidney, intestine, and serum identical? use of bile acids in differentiation, A., III, 222. Schütz-Borissov law enzymes, A., III, 352. Use of different measures of reaction velocity in the study of the kinetics of biochemical reactions, A., III, 427.

See also Bakwin, H.

Bode, C. E. See Sandstedt, R. M.

Bode, G. See Micheel, F.

Bode, H., bridged ring systems; density, refraction, and hydrolysis of esters, A., II, 341. Chemical composition of artificial coals, B., 743.

Boden, J. See Pfefferkorn, K. Bodendorf, K., "Pao de cobra," a drug

used in Brazil against the bite of poison. ous snakes, A., III, 191.

Bodenheimer, F. S., Florida wax scale

(Ceroplastes floridensis, Comst.) in Palestine, B., 1390.

Bodenstein, M., gas reactions in chemical kinetics, A., I, 85. Mechanism of the catalytic combustion of ammonia, A.,

Brenschede, W., and Schumacher, H. J. photochemical formation of carbonyl chloride. IX. Development and dying out of chain mechanism at beginning and end of illumination, A., I, 318.

and Jockersh, H. [with Chong, S. H.]. formation of hydrogen fluoride from its clements, and absorption of light by fluorine, A., I, 254.

Bodily, H.L. See Smith, F.B. Bodin, M.A., determination of combustible sulphur in polysulphide fuels, B., 1156.

Bodine, E. W., and Durrell, L. W., Maynard plum—a carrier of the peach-mosaic virus, B., 1255.
Bodine, J. H., and Boell, E. J., effect of

dinitrophenol and dinitrocresol on the oxygen consumption of diapause and developing embryos, A., III, 172. Respiration of embryo versus egg (Orthoptera), A., III, 258.

Bodmer, G., detection of gum in gas, B.,

864.

Bodnár, J., and Bártfai, J., activation by heat of the catalase of fat, A., III, 67. and Nagy, L. von, microtitrimetric determination of nicotine in tobaccos of varying nicotine content, B., 619.

Bodo, R. C., and Brooks, C. M., effects of morphine on blood-sugar and reflex activity in the chronic spinal cat, A., III, 425.

Cotui, F. W., and Benaglia, A. E., mechanism of morphine hyperglycæmia; rôle of the adrenal glands, A., III, 436.

Bodroux, F., butter containing boric acid [in France], B., 1262.

Bodson, (Miss) E., and Dehalu, (Miss) F., aluminium oxide bands, A., I, 441.

Bodson, H. See Timmermans, J.

Boe, J., and Gex, (Mile.) M., modifications in spectra of aqueous solutions of phenylpyruvic acid as a function of $p_{\rm H}$ and time, A., 1, 236. Böck, E. See Lock, G.

Boedecker, F., Gruber, H., and Riedel-E. De Haen A.-G., J. D., substituted barbituric acids, (P.), B., 499.

Böe, H. See Schlubach, H. H.

Böeseken, J., oxides of thiocarbamide. Thiocarbamide dioxide, (NH₂)₂CSO₂. II. Thiocarbamide trioxide (formamidinesulphonic acid), A., II, 10. Vegetable oils (University of Delft), B., 941.

and Takes, H. V., dipole moment of a monosubstituted derivative of cyclopropanc (n-propylcyclopropane), A., I, 499.

and Zuydewijn, E. de R. van, properties of unsaturated sulphones, A., II, 132. Boegehold, A. L., alloy steels, B., 791. Plain carbon steel, B., 791. Apprais-

ing a steel for a given duty, B., 1214. and Gen. Motors Corp., bearing-metal alloy and bearing made therefrom,

(P.), B., 581.

Boegel, J. W., laboratory-scale coullition tube, A., I, 50.

Boeglin, J., filtration of viscose, B., 1187. Boehler, P. See Battegay, M.

Böhler Gebrüder & Co., Akt.-Ges., welding

wires, (P.), B., 1362. and Leitner, F., welding wires, (P.), B., 458.

Böhm, E. See Böhm, F. Böhm, F. [with Grüner, G., and Böhm, E.] biochemistry of excretion of indole and of production of indican, A., III, 211.

and Richter, W., rapidity of evolution of carbon dioxide in several beers, B., 278.

Böhm, G., economies [effected] by saponifying fatty acids with calcined soda, B., **3**65.

Böhme, H., permonophthalic acid and its application in place of perbenzoic acid as an oxidising agent, A., II, 149.

and Reichert, B., spectrophotometric investigation of anti-sunburn preparations, B., 1130.

and Steinke, G., oxidation of fats by per-acids, A., II, 397.

Böhme Fettchemie-Ges.m.b.H., dyeing of fibrous materials, (P.), B., 232. Sizing

of artificial silk, (P.), B., 1330.

Boehmer, J. W., α-6-methoxy-8-quinolyl-β-alkylcarbamides, A., II, 517.

Bøje, O. See Bang, O.

Boekenoogen, H. A., oil from seeds of Onguekoa Gore, Engler, B., 1233. Boell, E. J. See Bodine, J. H.

Bömer, A., and Kappeller, W., glycerides of elaidic acid, A., II, 439. and Stather, J., synthesis of glycerides

of isooleic acid, A., II, 133.

Böninger, G., damage to pipes by stray currents, B., 1067.

Bönisch, A. See Rys, L. Boenkov, M. V. See Archarov, V. I.

Boer, A. G. See Nierkerk, J. van. Börger, E. See Roth, W. A. Boeri, E. See Bergami, G.

Boerlage, G. D., and Blok, H., four-ball top for testing boundary lubricating properties of oils under high mean pressures, B., 871.

and Gravesteyn, B. J. J., cylinder wear in Diesel engines, B., 109.

and Peletier, L. A., mixture strength in petrol engines continuously controlled by electric exhaust gas analysers, B., 641.

Botcher, H. N., destruction of metals by cavitation, B., 688.

Böttcher, H. Sce Pfeiffer, P.

Böttger, O., organic compounds of "diamontoid" structure, A., II, 152.

Böttger, S. See Spengler, O.
Böttger, W., performance of microchemical reactions, Â., I, 262.

Boenf, F., and Novikoff, V., lysimetric studies under various crops in Tunis, B., 821.

Bogan, J. A. See Proffitt, M. J. Bogart, M. J. P., design of equipment for fractional batch distillation, B., 989.

Bogart, R. See Whitnah, C. II. Bogatscheva, K. I. See Schorigin, P. P. Bogdan, S. See Hrynakowski, K.

Bogdanov, G., and Elisafova, E., manufacture of soap by Bogdanov's continuous process, B., 57.

Bogdanov, I. F., and Baschkirova, E. I. selective properties of platinum in hydrogenation of mixtures of unsaturated compounds, A., I, 90. Selective properties of palladium, in hydrogenation of mixtures of unsaturated compounds, A., I, 90.

See also Ipatiev, V. V., jun.

Bogdanov, S. G., oxidation-reduction potential of p-methylaminophenol, A., I, 32.

Bogdanov, S. V., and Cheifetz, S. A., sulphonation by means of sulphites. Mechanism of the Piria reaction, A., II, 332,

Bogdanovitsch, B. V., theory of fine structure in the X-ray absorption spectra of molecular gases, A., I, 349. Theory of fine structure in the X-ray absorption spectra of triatomic molecules, A., I, 446.

Bogdanovitseh, S. B. See Benoit, J. Bogdanovskaja, R. See Kozlov, N.

Bogdantschenko, A. G., apparatus for rapid mass vacuum filtration, A., I, 380. Rationalisation of apparatus for distillation method of determining water content of solids, A., I, 537. Determination of carbon in slowly combustible materials of high carbon content, in a duplicated Würtz apparatus, A., II, 172. Determination of carbon in fuels, using the Würtz apparatus, B., 637, 1151. Rapid simultaneous determination of sulphur and carbon in steel, B., 1062.

See also Udovenko, N. V.

Bogen, E. See Loomis, R. N. Bogert, M. T. See Adelson, D. E., Akin, R. B., Joy, H. van B., and Perlman, D.

Boggess, T. S. See Beard, H. H. Boggild, J., and Karkov, A., Hoffmann

collisions and multiplication of rays, A.,

Bogin, C., and Wampner, H. L., interpretations of evaporation data based on behaviour of solvents in lacquer films, B., 1238.

Wampner, H. L., and Gosselink, K. R., effect of alkyd resins on tolerances [for diluents] of cellulose nitrate solvents and on viscosities of cellulose nitrate solutions. I. and II., B., 368, 590.

Bogojavlenskaja, K. J. See Stender, V. V. Bogojavienski, E. N., and Chazin, L. G., crystallisation [of potassium chlorate] with water-cooling, B., 903.

Bogolulov, V., caustic magnesia lining for arc furnaces, B., 440.

Bogomolov, A. N. Sce Nesterova, V. I. Bogoroditski, N. P., and Malischev, V. N., dielectric losses in crystals, A., I, 11. Dielectric losses in glasses, B., 37.

Bogoslovski, B. M., action of nitrobenzoyl chlorides on pyridine, A., II, 208. Utilisation of phenanthrene for synthesis of dyes of the type of fluorescein and rhodamine, A., II, 428.

See also Ismailski, V. A.

Bogue, J. L., Evans, C. L., Grande, F., and Hsu, F. Y., effect of adrenaline and of increased work on carbohydrate metabolism of the mammalian heart, A., III,

Boguslavski, I. M., Benkovski, S., and Sintschuk, V. E., preparation of sodium hydroxide and sulphuric acid from mirabilite, B., 339.

See also Belopolski, A. P. Bohle, K. See Tschesche, R.

Bohn, D. I., spot and seam resistancewelding of aluminium alloy sheet, B., 1223.

See also Aluminum Co. of America.

Bohn, L. J., and Bailey, C. H., effect of fermentation, dough ingredients, and proteases on physical properties of flour doughs, B., 832.

Bohn, R. M., stability of mixed shortenings

in crackers, B., 179.

Bohn Aluminum & Brass Corporation. See McCullough, W. E.

Bohny, P. See Rupe, H.
Bohr, N., transmutations of atomic nuclei,
A., I, 544. See also Aston, F. W.

Bohrn, A. See Schwarz, C. Bohstedt, G. See Hayward, J. W., and Pearson, P. B.

Bohy Frères & Co., drying process for ceramic building products, (P.), B., 1207.

Boidin, A., bating [of hides and skins], B.,

Boinot, F., chemical control in distilleries operating on apples, B., 486.

Bois, D., and Arnaud, G., action of different metals on vine mildew, B., 1390.

Bois, E., and Nadeau, A., Acer saccharum; amylases of maple sap and their buffering power, A., III, 67.

Boischot. See Bordas. Boischot, P., reversion of superphosphate in calcareous soils, B., 707.

and Drouineau, G., employment of fertilisers in solution, B., 708. Influence of irrigation on the nitrate content of soils, B., 820.

Boiseau, R., neutralising action of adren-aline hydrochloride on tetanus toxin

in vitro, A., III, 71.

Boisson, (Mlle.) S. Sco Fleury, P.

Boissonnas, C. G., properties of polymerides in solution. IV. Free energy and heat of formation; solutions of butyl valerate and sebacate, A., I, 413.

and Meyer, K. H., properties of polymerides in solution. VI. Free energy and heat of solution; system cellulose nitrate-cyclohexanone, A., I, 413.

and Wyk, A. J. van der, properties of polymerides in solution. V. Measurement of vapour pressure, A., I, 413.
Boitschenko, E. A., reduction of silver

nitrate by chromatophores of Zygnema and other green alge, A., III, 499. Boivin, A., and Izard, Y., purification of

diphtheria, tetanus, and staphylococcus toxins and anatoxins by means of trichloroacetic acid, A., III, 86.

and Mesrobeanu, L., toxins of dysentery bacillus; toxic principles in filtrate from broth cultures of the bacillus of Shiga; antitoxic protective power of sera obtained after injection of endotoxin-antigen-O of Shiga's and Flexner's bacilli; toxic principles of the bacillus of Flexner, A., III, 116, 197, 338. Bacterial variation and complete somatic O antigen, A., III, 147. Biological properties of toxins produced by the Shiga and Flexner bacilli, A., III, 183. Protective antitoxic power of the sera obtained from animals injected with sugar-lipin endotoxins, A., III, 197. Relation between chemical constitution of the somatic antigen and Gram-staining of the bacteria, A., III, 227. Antigen-O and Pyocyaneus endotoxin, A., III, 250. Existence of a thermolabile and neurotropic toxin (exotoxin) in the Shiga bacilli, A., III, 338.

See also Mesrobeanu, L., and Ramon, G. Boizova, Z. V., and Butkov, K., absorption spectrum of an atomic solution of tellurium in sulphuric acid, A., I, 597.

Bokhaven, W. C., and Löcker, H. O., adsorption of gases and vapours by active

carbon, A., I, 178.

- Bokij, G. B., and Burovaja, E. E., erystallographic study of the solid phases in the system $K_2O-P_2O_5-H_2O_5$ (1) KH_2PO_4,H_3PO_4 , (2) $K_2HPO_4,3H_2O$, A., I. 617.

Bol, C., new mercury lamp, B., 693.

Bolas, B. D., and Goodall, D. W., movement of assimilate in tomato seedlings, A., III, 365.

Bolcato, V., lacto-mannitic enzymes. IV. Influence of the medium on the fermentation of glucose and fructose, A., III, 69. Reaction of medium and activity of ordinary and Aspergillus pre-treated cultures, A., III, 315.

Boldireva, N. V., content of phosphorus

compounds in the brain of animals, A., III, 198. Influence of external conditions and of physiological state of animals on cerebral phosphorus com-

pounds, A., III, 339.

Boldizsar, I. See Schulek, E.

Boldrini, R. See Rossi, B.

Boldt, A., detection of quinic acid in presence of shikimic acid in carpels of Illicium verum, Hook., and the preparation of quinic acid derivatives, A., II, 194.

Boldyreff, W. N., pancreas and general metabolism, A., III, 258.

Boldyrev, A. K., atomic and ionic radius in crystals, A., I, 399.

Bole, G. A., insulating refractories, B., 1341.

Bolen, W. P., and Dusseldorf Chem. Co., dye mixture [vat and sulphur dye preparations], (P.), B., 1184.

Bolidens Gruvaktiebolaget, tubular gascooling apparatus, (P.), B., 402. Arrangement of electrode wires or threads in electrical gas purifiers and similar apparatus, (P.), B., 695, 937. Apparatus for gravity determinations [for locating ores, etc.], (P.), B., 858. Bolin, D. C. See Pfau, G. M.

Boll, H. See Lambris, G.

Bolla, G., polarisation effects in quartz

spectrographs, A., I, 60.

Bolland, J. L., and Melville, H. W., analysis of ternary gas mixtures by thermal conductivity measurements, A., I, 479. Micro-thermal conductivity gauges, A., I, 582.

Sco also Melville, H. W.

Bolle, J. See Vavon, G. Bollenrath, F., and Gröber, H., resistance to sea-water of aluminium forging alloys used in aircraft construction, B., 1223.

See also Cornelius, H.

Boller, C., painting of steel structures and plant, B., 155.

Bolli, M., [plant-]amylases, A., III, 482.

Bolliger, A., reaction of creatinine with 1:3:5-trinitrobenzene, 2:4:6-trinitrotoluene, and 2:4:6-trinitrobenzoic acid, A., II, 139.

Bollman, J. L., and Mann, F. C., effect of liver in formation and destruction of bile salts, A., III, 173. Physiology of the impaired liver, A., III, 461.

See also Flock, E. V., and McGowan, J. M.

Bollman, R. R., and Perfect Manuig. Co., plastic rubber composition, (P.), B., 1240.

Bollman, V. See Dn Mond, J. W. M. Bolman, J., investigation of precious stones, A., I, 484.

Bolomey, J., grain structure and calculation of the expected strength of concrete, B., 554. Influence of addition of powdered stone to the cement on the qualities of concrete, B., 785.

Bolotnikov, S. M., analysis of ichthyol, B., 839.

Bolotov, B. A., Leman, V. R., and Popova, A. N., synthesis of urea from ammonia and carbonic acid in presence of excess of ammonia. II., B., 1017.
Popova, A. N., and Sokolova, J. K.

synthesis of urea from ammonia and carbonic acid in presence of excess of ammonia. I., B., 1017.

and Tugai, D. G., regeneration of gases from synthesis of urea from ammonia and carbon dioxide. I., B., 1200.

Bolotov, I. P., electrometric determination of copper, lead, and zine in foods, B., 724.

Bolton, B., Carmichael, E. A., and Williams, D. J., mechanism of the peripheral vascular responses to changes în blood-gas tension in man, A., III, 335.

Bolton, C., and Goodheart, G. W., rôle of duodenal regurgitation in automatic regulation of the gastric acidity, A.,

and Wright, G. P., absorption of aminoacids and their distribution in bodyfluids, A., III, 344.

Bolton, E. K. See Du Pont de Nemours & Co., E. I.

Bolton, E. R., and Williams, K. A., new type of colorimeter, A., I, 49. Colour measurement of opaque surfaces, A., I,

Bolton, F. J., calamine in pharmacy and cosmetics, B., 1406.

Bolton, J. F., surface-aëration plant for treating sewage, (P.), B., 1282.

Bolton, V. L., amidopyrine, barbital, phenylhydrazine, and benzene in relation to agranulocytic angina, A., III, 11.

Bolton & Sons, Ltd., T., and Alkins, W. E., welding electrodes, (P.), B., 1362

Boltz, C. See Tschepelevetski, M. L. Boltz, H. A. See Baker, E. B.

Bolzinger, A., and Faucon, L., steaming of intermittent chambers, B., 201.

Bommer, H. See Klemm, W. Bomonti, H. F., and Bomonti & Co., sugar refining, (P.), B., 382.

Bomonti & Co., Ltd. See Bomonti, H. F. Bompiani, R., and David, M., hormone content of the urine of women during the normal sexual cycle and in amenorrhoa; extraction of the hormone, A., III, 74.

Bonar, B. E., ieterus index in the newborn infant, A., III, 257.

Bonaventura, G. See Verona, O.

Bonazzi, A., cell inclusions in Azotobacter chroococcum, Beij., A., III, 273. Heavy limestone soils of Cuba, B., 1383.

Sec also Alvarino, J., and Beauchamp, C. E.

Boneiu, C., and Ioanid, N., distribution of chloroform and chloral hydrate during experimental chloral hydrate poisoning, A., III, 351.

Bond, C. R., Knight, E. C., and Walker, T. K., production of glucosone from carbohydrates by enzymic action, A., III, 354.

Bond, D. C., magneto-optic method of analysis, A., I, 259.

Bond, F. C., and Masson, W. L., crushing and grinding characteristics [of ores] as determined from screen analyses, B., 49.

Bond, G., exerction from leguminous root nodules, A., III, 284. Exerction of nitrogen by leguminous plants, A., III, 500.

Bond, H. A. See Du Pont de Nemours & Co., E. I.

Bond, L. V. See Vandecaveye, S. C. Bond, W. N., viscosity of air, A., I,

Bondarenko, J. See Tartakovskaja, V. Bonde, R. See Raleigh, W. P.

Bondi, A., theory of viscosity. I. Orientation effect, B., 12. Setting point of mineral oils, B., 752.

Bone, M. D. See Favorski, A. E.

Bone, W. A., and Outridge, L. E., influences of dilution on the explosive combustion of hydrocarbons, A., I, 141. See also Imperial Chem. Industries.

Boner, C. J., metallic soaps for thickening

mineral oils, B., 206.

Bonestell, A. E. See Kofoid, C. A.

Bonét-Maury, P., use of photo-elements with blocking layer for radioactive measurements, A., I, 535.

Bonfiglio, G. See Linari, A. Bonfils, F. W. See Eader, W. H.

Bongarcon, damping down and restarting blast furnaces, B., 917.

Bonhoeffer, K. F., and Fredenhagen, H., Cannizzaro reaction, A., II, 378.

and Gunther, G., polysaccharide synthesis in the yeast cell, A., III, 395.

and Reitz, O., mechanism of hydrogen ion catalysis, A., I, 469.

See also Jungers, J. C.

Bonhomme, W. See Thyssen, H. Bonhôte, G. Sco Soc. Chem. Ind. in Basle.

Boniface, A., treatment of garbage, (P.), B., 850.

Bonilla, C. F., heavy nickel and chromium [clectro-|deposition in England; recovery of excessively worn machine parts, B., 52. Calibrating Saybolt universal viscosimeters, B., 872.

Bonino, G. B., molecular symmetry of thiophen, A., I, 10. Molecular symmetry of thiophen. I. and II., A., I, 222, 283. Molecular constitution of naphthalene, A., I, 224; II, 450. Molecular symmetry of pyrrole, A., I,

and Manzoni-Ansidei, R., Raman effect and chemical constitution of pyrrole, A., I, 10. Raman spectrum of Ndeuteropyrrole, A., I, 10, 599. Raman spectrum and molecular constitution of thiophen and furan, A., I, 10. Raman spectrum of d- α -pinene and of l- α -pinene, A., I, 10. Molecular diamagnetism of pyrrole and of some of its derivatives, A., I, 20. Molecular diamagnetism of thiophen, furan, and their derivatives, A., I, 20. Raman spectrum of camphor and camphoraldehyde (hydroxymethylenecamphor), A., I, 168. Raman spectrum of thiophen, A., I, 168. Lines attributed to a possible pyrrolenine form in the Raman spectrum of pyrrole, A., I,

Manzoni-Ansidei, R., and Lemetre, G., Raman spectrum of alkyl-dihydro- and -tetrahydro-pyridines, A., I, 10.

and Scaramelli, G., electrolytic reduction potential of pyrrole aldehydes. II., Â., I, 187.

Bonnar, R. U., electrometric titration of acidity [of wines, etc.], B., 967.

Bonneman, P., condensed phosphoric acids, A., I, 195. Tetrametaphosphates, A., I,

Bonner, J., [plant] cell clongation and the micellar theory, A., III, 49. Vitamin-B₁ a growth factor for higher plants, A., III, 242.

and Axtman, G., growth of plant embryo in vitro; rôle of accessory substances, A., III, 409.

and English, J., jun., purification of traumatin, a plant wound hormone, A., III, 502.

and Heyn, A. N. J., [plant] cell clongation; electrical properties of the cell wall, A., III, 157.

Bonner, L. G., vibration spectra and molecular structure. II. Force constants of the CC and CO bonds in organic molecules. III. Infra-rcd absorption spectra of cyclopropane and ethylene oxide, A., I, 344, 549. Globar support for infra-red spectrometry, A., I, 534.

and Barnes, R. B., properties of crystal powders in the far infra-red, A., I, 548.

See also Barnes, R. B. Bonner, P. See Hummel, F. C. Bonner, T. W., and Brubaker, W. M., disintegration of nitrogen by fast neutrons, A., I, 4.

Delsasso, L. A., Fowler, W. A., and Lauritsen, C. C., mass of the neutrino from the disintegrations of carbon by deuterons, A., I, 492.

See also Stephens, W. E. Bonner, Thomas W., Salomon, S. M., and Bnsch, S., reduction of grain and bran and their subsequent conversion into bread or similar product, (P.), B., 185.

Bonnet, J. A., nitrification in soil types of northern Puerto Rico, B., 477.

Bonnet, R., and Jacquot, R., influence of antioxidants, methylene-blue and dinitrophenol, on growth of Aspergillus niger, A., III, 144.

See also Terroine, E. F.

Bonnet, V., antagonism between acetylcholine and strychnine in the crayfish, A., III, 217.

Bonnet-Descars, C., plastic compositions containing sulphur as rubber substitute.

Bonnett, O. T. See Woodworth, C. M. Bonney, D. T., and Huff, W. J., absorption of hydrogen in liquid reagents; solution for the determination of hydrogen in gas mixtures, A., I, 323.

Bonney, R. D., Egge, W. S., and Congoleum-Nairn, Inc., drying oil composition, (P.), B., 587.

See also Congoleum-Nairn, Ltd. Bonney, V. B., and Rowe, S. C., maturity of

canned peas, B., 282. See also Rowe, S. C.

Bonney-Floyd Co. See Gregg, A. W. Bonnybridge Silica & Fireclay Co., Ltd., and McBryde, W., gas-fired kilns, (P.), B.,

Bonnyns, R. See Zunz, E.

Bonotto, M., safety in solvent extraction, B., 400.

and Amer. Soya Products_Corp., breadleavening composition, (P.), B., 494.

Bonrath, W., Urbschat, E., and Winthrop Chem. Co., seed grain disinfectant, (P.), B., 1256.

Bonser, G. M. See Berenblum, L.
Bonstedt, E. M. See Silbermintz, V. A.
Bonta, M. See Leone, P.
Bonte, F. R., and Fleischmann, M.,

graphitio steel for tools and dies, B., 918.

Sec also Stumpf, G. A.

Bontebal, J., oiticica oil, B., 58.

Bonzel, M., disturbances caused in the dilatometric diagram by cold-working of metals, B., 793.
Booer, J. R. See Brett, C. C., and Weston,

W. A. R. D.

Booge, J. E. See Du Pont de Nemours & Co., E. I.

Booher, L. E., concentration and properties

of vitamin-H, A., III, 328.

Bookenoogen, H. A., chromatography and its application to study of linseed oil, B.,

Boomer, E. H., Johnson, C. A., and Argue, G. H., equilibria in two-phase, gas-liquid hydrocarbon systems. I. Methods and apparatus, A., I, 636.

Boon, W. L., rational production and utilisation of gas coke, B., 103. Industrial uses of coke, B., 1293.

Boon, W. R., action of meat extracts and related substances as gastric stimulants in man, A., III, 476.

Boonstra, A. E. H. R., influence of various assimilating organs on seed yield of wheat, A., III, 48.

Boor, A. K. See Dick, G. F. Boorman, E. J. See Newitt, D. M.

Boos, M. F., heavy minerals from Front Range granite, A., I, 204.

Boos, W. F., and Werby, A. B., arsenic in human tissues and food animals. I. So-called normal arsenic, A., III, 118.

Boot, P. J., wood rosin and turpentine; use of wood naval stores in paint and varnish, B., 808. Booth, A. P. See Ward, Ltd., T. W.

Booth, C. F., and Swann Res., manganese

phosphates, (P.), B., 343.

Booth, E. T., and Dixon, E. H., discontinuity in the thermoelectric power of rhodium, A., I, 606.

and Hurst, C., scattering of neutrons by protons, A., I, 58. Experiments with iso-energetic neutrons, A., I, 544.

Booth, E. W., and Beaver, D. J., air-bomb ageing test for [rubber-]tread compounds, B., 265.

Booth, F. A. See Beadle, L. C. Booth, G. A., defrosting brick, (P.), B., 302. Booth, H. See Clews, F. H.

Booth, H. S., finely-divided material, (P.), B., 740. [Composite] pigments, (P.), B., 1375.

and Bozarth, A. R., laboratory purification of gases by fractional distillation, A., I, 481.

Booth, H. T., and Lubrication Control

Corp., viscosimeter, (P.), B., 997.

Booth, N., and Williams, F. A., continuous hydrogenation of coal. I. Development of a liquid-phase plant, B., 1294.

Booth, W. E. Sco Stein & Atkinson, Ltd. Booth, W. E. Sco Imperial Chem. Industries.

Boothby, W. M. See Adams, M.

Boots Pure Drug Co., Ltd., Pyman, F. L., and Levene, H. H. L., substituted diamines; [amœbicides], (P.), B., 288.

Bopp, A., corrosion preventatives and methods of preventing corrosion, (P.), B., 251.

Bopp, F., double Compton scattering, A., Ĭ, 487.

Boppel, H. See Freudenberg, K.

Boquet, A., and Sandor, G., purification of tuberculin, A., III, 86. Boquet, P. See Césari, E.

Bor, J., photo-electric measurement of the optical constants of metals, A., I, 378.

Boratynski, K., and Burström, H., intake of copper and manganese by wheat from media of different $p_{\rm H}$, A., III, 407.

Borchard, K. H., and Achmed, H. H., influence of temperature on strength of glass bottles, B., 670.
Borchardt, H. See Dingemanse, E.

Borchert, H., natural sulphidic iron-copper

ores, and genetic conclusions, A., I, 432. Differences in behaviour of old and new gold ore gangues, A., I, 434.

Borchert, W., variety and mutual conditions of polymorphous transformations of potassium nitrate, A., I, 173.

Bordas, Anres, Boischot, and Drouineau, culture of tomatoes, B., 1401.

Bordeianu, C. V., iodination of phenols, A., II, 239. Destruction of organic mercury compounds for determination of this element, A., II, 313.

Borden, A. D., tank-mixture method of using oil sprays for deciduous fruits, B.,

603.

Borden, E. G., and Gasoline Antioxidant Co., motor fuel, (P.), B., 1014.

Borden, R. J., plant-food value of molasses and filter cake, B., 167. Sources of nitrogen [for Sudan grass]: anhydrous ammonia versus ammonium sulphate rersus ammonium nitrate, B., 168. Availability of principal soil nutrients during the [sugar-cane] crop-growth period, B., 1388.

Borden's Milk Products, Co., Inc., and Salzberg, H. K., foundry cores, (P.), B., 1225. Bordet, P., favourable effect of yeasts on the utilisation of carbohydrates and production of toxin by the diphtheria bacillus, A., III, 397.

Borek, E. See Harrow, B. Borel, J. See Soe. d'Exploit. des Cables Electr. Système Berthoud, Borel & Co.

Borelius, G., theory of transition of metallic mixed phases. IV. Separation of disordered mixed phases, A., I, 233. Regularities in the heat-conductivity of metals, A., I, 355. Resistance of alloys with disordered and ordered arrangement of atoms, A., I, 559.

Borén, B. See Aamark, K. Boreskov, G. K., genesis of catalysts, A., I, 35.

and Schogam, S. M., kinetics of the oxidation of nitrogen oxide in presence of activated charcoal, A., I, 192.

Borg-Warner Corporation, and Ingersoll, S. L., forming bimetal or laminated metal articles, blanks, etc., (P.), B., 251. Borgen, D. R., and Elvehjem, C. A., factors

affecting the determination of inorganic iron in animal tissues, A., III, 448. Borgesius, T. W. A. See Waterman, H. I.

Borghello, N. See Sandonnini, C.

Borghetty, H. C., and Broden, K. J., identification of vat dyes on textile fibres, B., 1326.

Borghijs, L., tetragonal enantiomorphous nickel sulphate hexaliydrate, A., I, 449.

Borglin, J. N. See Hercules Powder Co. Borgmann, C. W., initial corrosion rate of mild steel; influence of the cation, B., 1059.

See also Benedicks, C.

Borgmann, K., detection of bromide and iodide [and of β -naphthol in drugs], B., 1130.

Borisiuk, J. G. See Valjaschko, N. A. Borisov, N. P., energies of selective absorption bauds of neutrons in silver, A., I, 339.

Borisov, N. V. See Arzibischev, S. A. Borisov, P. P., and Stepanov, S. S., properties of ruthenium, osmium, and iridium catalysts precipitated on highly active charcoal, A., I, 368.

Bork, A., and Darikina, M. I., catalyst poisoning from viewpoint of specificity of active centres. V. Relative duration of stay of water and ethyl alcohol molecules on copper, A., I, 573.

Borkij, G. B. See Kurnakov, N. S. Borkowsky, F. See Mannich, C.

Born, H. J., geochemical connexion between helium, lead, and radium occurrences in German salt deposits, A., I, 432. Recording by means of emanating power of changes in structure and surface even of very short duration; thermal decomposition of thorium oxalate, A., I, 481.

.Born, M., wave mechanics of couples (neutron-neutrino), A., I, 110. and Nath, N. S. N., neutrino theory of light. II., A., I, 215. Bornand, M., germs in the air, B., 92. Disinfection [with hydrogen cyanide], B., 984.

Borocco, A. See Hackspill, L.

Borodina, G. M. See Kotscheschkov, K. A.

Borodina, O.J. See Michlin, D.Borodulia, N. See Ricci, J. E.

Borovik, S. A., tin in micas, A., I, 382. Spectroscopic determination of rareearth elements in some minerals found in the U.S.S.R., A., I, 382.

and Borovik-Romanova, T. T., variations of intensity in titanium and vanadium lines, caused by introduction of sodium and potassium salts

into the arc, A., I, 485.
and Sosedko, A. F., gallium in specimens collected by expeditions of the Lomonosov Institute of the Academy of Science of the U.R.S.S., A., I, 206.

Borovik-Romanova, T. T. Sce Borovik, S. A.

Borriss, H., effect of soil in stimulating germination, B., 73.

Borrmann, G., interference from lattice sources on excitation by X-rays, A., I. 55.

Borruso, G., action of pituitary hormone on blood-ketones in endogenous cachexia, A., III, 38. Action of pituitary extracts on blood-fats and -ketones in obesity, A., III, 38.

Borsche, W. [with Kettner, S., Gillies, M., Kühn, H., and Mantenffel, R.], syntheses in the naphthalene group. Syntheses of 4-hydroxy-1-arylnaphthalene-2-carboxylic acids, 4-hydroxy-Iarylnaphthalenes, and of 2-hydroxy-3:4-benzofluorenones, A., II, 18.

and Bütschli, L., quinolyl-4-pyruvic and -acetic acid, A., II, 305.

and Diacont, K., claterin, A., II, 160. and Leditschke, H., syntheses in the naphthalene group. II. Heterocyclic analogues of 4-hydroxy-1-aryl-2naphthoic acids, A., II. 257

and Manteuffel, R., quinolyl-2-pyruvic

acid and -2-acetic acid, A., II, 32. and Noll, W., polynnelear condensed systems with heterocyclic rings. I., A., II, 518.

and Sinn, F., polynnelear condensed systems with heterocyclic rings. II., A., II, 519.

Borsehke, E., heat and cold insulation, B., 628.

Borschtsehevski, M. M. See Beininson, I. D.

Borshkovski, S. E., Guli, M. F., Smoljar, V. O., Martinenko, A. K., Michailova, V. V., and Netschitailo, M. K., metabolism of draught horses. IV. Effect of partial substitution of oats by the waste products of the sugar industry on the utilisation of nitrogen, calcium, and

phosphorus, A., III, 303. Guli, M. F., Smoljar, V. O., and Netschitailo, M. K., metabolism of draught horses. III. Composition and digestibility of hay-oats and hay-oatssugar-beet press-molasses diets, B.,

494. Martinenko, A. K., and Michailova, V. V., metabolism of draught horses. II. Effect of partial substitution of oats by waste products of the sugar industry on alkali reserve and lactic acid of blood, B., 185.

Borsook, H., Davenport, H. W., Jeffreys, C. E. P., and Warner, R. C., oxidation of ascorbic acid and its reduction in vitro and in vivo, A., II, 86.

Ellis, E. L., and Huffman, H. M. oxidation-reduction potentials of thiol compounds derived from thermal data, A., Ĩ, 140.

and Jeffreys, C. E. P., effect of added purines on uric acid production by isolated tissues of the rat, A., III, 61.

Borst, W., and Möbius, W., glycine treatment of progressive muscular dystrophy, A., III, 301.

Borst, W. B. See Universal Oil Products Co.

Borsuk, V., oxidation coefficient of lactic acid in the animal world, A., III, 212.

Borthwick, H. A., retarded germination in seed of Hypericum perforatum caused by calcium, A., III, 240. Sco also Emsweller, S. L.

Boruff, C. S., Buswell, A. M., and Upton, W. V., adsorption of fluoride from salts by alum floc, B., 1414.

See also Buswell, A. M.

Borzdika, A. M., thermoelectric pyrometer for very high temperatures (1500-2000°), B., 459. Bosanquet, C. H. See Imperial Chem.

Industries.

Bosart, L. W., change in refractive index [of essential oils] with temperature variation, B., 498.

Bosazza, V. L., relationship between structure and life of silica bricks in the roof of an open-hearth steel furnace, B., 782. Physical properties of South African raw materials for silica bricks, B., 1051.

Bosc, M., copper sprays with ammonium sulphate, B., 602.

Bosch, van den, and Vialle, metallography of rustless steels, B., 918.

Bosch Akt.-Ges., R., vulcanisation of rubber on to articles of light metal, (P.), B., 474.

See also Stribeck, R. Boschán, G., and Fenyö, C., medicated

smoking goods, (P.), B., 393.

Bose, B. K., effect of manganese on "annealing-brittleness" of cupronickel, B., 922.

Bose, D. M., absorption spectra evidence of the decomposition of the ground term of Nd+++ ion due to crystalline fields, A., I,

Bose, J. B. See Chopra, R. N.

Bose, J. P., arterio-venous sugar difference in diabetes mellitus: its value in adjudging the severity of the disease, A., III, 300.

and De, U. N., cholesterolæmia in normal and diabetic Indian subjects, A., III, 451.

Bose, P. K., and Ghosh, S. K., ayapin, A., II. 161.

and Guha, N. C., synthetic compounds related to atophan, A., II, 170.

and Roy, A. C., constitution of ayapanin, A., II, 70.

See also Späth, E.

Bose, S. R., and Sarkar, S. N., enzymes of some wood-rotting Polypores, A., III, 310. Boshamer, K., influence of vitamin deficiency on [after-effects of] surgical operations in south China, A., III, 153.

Bosher, J. E. See Newton, W.Boshes, B. See Pollock, L. J.

Boshkoff, G. J. See Linde Air Products ... Co., and Union Carbide & Carbon Corp.

Bosin, A. G., and Jofan, S. S., volumetric determination of small amounts of zinc, A., I, 327.

Bosman, L. P., pregnancy test: presence of histidine in urine of pregnant women, A.,

Bosman, (Mlle.) M. See Olivier, S. C. J.

Bosq, P. See Escudero, A. Bossard, J. R. See Wilcox, R. L.

Bossart, O. A., and Eberhardt, E. G., tubular heat-exchange apparatus, (P.), B., 301.

Bossart, P. N., spectral emissivities, resistivity, and thermal expansion of

tungsten-molybdenum alloys, A., I, 127. Bosschieter, G., and Errera, J., infra-red

absorption spectra of liquid and solid water and water in solution, A., I, 495. Intramolecular linkings of water studied in the infra-red at 3 μ , A., I, 495. Ice, liquid water, and its solution in dioxan in the near infra-red, A., I, 598.

Bossert, E. Sec Union Carbide & Carbon Corp. Bossert, T. W., Alcon alloy 24S, B., 926.

Bossert Co. See Clement, W. J.
Bosshard, W. See Ruzicka, L.
Bosson, G., Peroxidases. II. Determination of purpurogallic index by a photometric method. metric method. III. Kinetics of action of horseradish peroxidase with the leucobase of malachite-green as substrate. IV. Absence of fluorescence of solutions of horseradish peroxidase in ultra-violet light. V. Determination of peroxidase activity, A., Ill, 353. Bossuet, R. See Jolibois, P.

Bossuyt, (Mlle.) V., mechanical properties of natural and mercerised cellulose fibres, B., 24.

Bost, G. See Fromageot, C.

Bost, R. W., and Fore, D., jun., composition of the chinaberry, A., III, 190. See also Wood, J. H.

Boston Blacking Co., Ltd., and Macdonald, Alexander D., securing together of surfaces by means of adhesive, (P.), B., 950. Treatment of polymerised chloroprene, (P.), B., 1380.

Boström, A. See Bäckström, H.
Boswell, M. C., catalyst for reduction of sulphur dioxide, (P.), B., 239.

and Beal, G. P., separation of sulphur dioxide from gaseous mixtures, (P.), B., 1203.

Bosworth, A. W. Sce Helz, G. E. Bosworth, M. W., O'Brien, H., and Amberson, W. R., determination of respiratory quotient in marine animals, A., III, 465.

Bosworth, R. C. L., photo-electric Schottky effect in films of sodium and potassium on tungsten, A., I, 301. Properties of hydrogen films on tungsten by method of contact potentials, A., I, 511. Contact potentials; evaporation of sodium films, A., I, 599. and Rideal, E. K., contact potentials;

condensation of potassium and sodium

on tungsten, A., I, 599.

Botezatu, M. Sec Sumuleanu, C. Botha, M. L. See Wijk, C. M. van. Botham, G. H. See Davies, W. M. Bothe, W., and Gentner, W., preparation of

new isotopes by nuclear photo-effect, A., I, 162. Artificial radioactivity produced by γ-rays, A., I, 162. Apparatus for highvelocity corpuscular rays and transmutation experiments therewith, A., I, 212. Further atomic transmutations by means of γ-rays, A., I, 212. Nuclear isomerism of bromine, A., I, 338. Atomic transformation by means of γ -rays, A., I, 438. Bothe, W., and Maier-Leibnitz, H., connexion between masses of light atoms, A., I, 109. Coincidence measurements on β - and γ -rays from Ra-C, A., I, 210.

Botkovskaja, E., and Artamonov, P., in-fluence of the nature of a carrier on catalyst activity, B., 586.

Botset, H. G. See Wyckoff, R. D.

Bott, D. B., destructive effects of sulphuric acid from coal gas on fabrics and house furnishings, B., 654. Precipitation of tannic acid by casein, B., 728.

Bott, P. A. See Elsom, K. A., and

Richards, A. N.

Bottcher, F. K., killing of bees in pest control, B., 297.

Bottelier, H. P. See Eymers, J. G.

Bottema, J. A. See Jaeger, F. M.

Botti, E. See Iandelli, A.

Bottini, E., garden fruit products; determination of the principal organic acids, B., 493. Fluorescence of Hesperidian fruits under the action of ultra-violet light, B., 614.

Bottini, O., thermal decomposition of ammonium-permutite, ammonium-bentonitc, and ammonium-clay, A., I, 138. Thermal decomposition of mixed ammonium-calcium permutites, bentonites,

and clays, A., I, 464.
Bottomley, G. T. C. Sce Andrew, J. H. Bottomley, H., hypochlorite treating [of petrols], B., 407.

Bottoms, R. R., and Girdler Corp., recovering acidic gases from gaseous mixtures, (P.), B., 344. N-Aminohydroxyalkylsubstituted alkylenediamines, (P.), B.,

Botvinnik, M. M., and Gavrilov, N. I., lactim-lactam tautomerism. I. Oxidation by perbenzoic acid of the double

linking between carbon and nitrogen, A., II, 307.
and Prokoflev, M. A., lactim-lactam tautomerism. II. Oxidation of glyoxaline and its derivatives by perbenzoic acid, A., II, 307.

Bouat, A. See Maume, L.

Bouchereau, P., action of hexamethylenetetramine on alkyl halides in presence of monophenols. II., A., II, 137.

Bouchet, \hat{C} ., and Lafont, R., spreading of castor oil and various glycerides on the surface of water, B., 940.

and Lamarche, P., spreading of constituents of castor oil, B., 940. Bouchet, L., colloidal state induced by

action of zinc on natural waters, A., I,

Bonchonnet, A., Trombe, F., and Petitpas, (Mlle.) G., nitration of cellulose. I.— III., A., II, 278; B., 424, 893. Nitration of cellulose by phosphoric-nitric acid mixtures, B., 1320.

Bouckaert, L., and Smoluchowski, R., theory of Brillouin zones and symmetry properties of wave functions in crystals, A., I. 553.

Bouffard, E. See Hugues, E. Bonghton, I. B., and Hardy, W. H., chronic copper poisoning in sheep, B., 83.

Bouhet, C., Raman effect in circularly polarised light in quartz, observed along the optic axis, A., I, 394.

Bouhuys, A. G., and Amer. Enka Corp. treatment [lubrication] of natural and artificial fibres, (P.), B., 27. Treatment [crêping] of artificial silk filaments, (P.),

Boulanger, (Mlle.) J., hydrates of molecular compounds of zirconyl oxalate with oxalic acid and alkali oxalates, A., I, 93. Boulgakov, N. A. See Sertic, V.

Boullion, L. F., and Pardee, A. M., pyrolytic products of azobenzene, A., 11, 493. Boulogne, E., and Soc. Industr. des Dérivés du Soufre, stable [suspensions of] colloidal sulphur from elementary sulphur and sulphurous anhydride, (P.), B., 1203. Colloidal sulphur in the dry state and at different degrees of concentration, (P.),

Bouman, J. See De Bruin, M., and Kok, J. A. F.

B., 1203.

Bountra, R. K., and Pandya, K. C., acid content of [Indian] vegetable food-stuffs. II. Amchur or Mangifera indica, B., 183.

Bourbo. See under Burbo.
Bourcet, P., laboratory "double effect" [condenser], A., I, 537.

Bourcey, E. F., and Bourcey, R. I., gas mask, (P.), B., 1412.

Bourcey, R. I. See Bourcey, E. F.

Bourdouil, C. S., composition of the pollen

of some Ranunculaceæ and their systematic position, A., III, 504.

Bourgnignon, G., and Monnier, M., histochemical demonstration of removal and fixation by dielectrolysis of ions previously introduced into the blood, A., III, 54.

Bourion, F., and Hun, (Mlle.) O., determination of hydration of ions of

sodium iodide, A., I, 411. and Rouyer, E., hydration of the ions in calcium nitrate, A., I, 362.

Rouyer, E., and Hun, (Mlle.) O., individual hydration of ions, A., I, 362. Bourne, G., vitamin-C technique as a con-

tribution to cytology, A., III, 232.

Bourne, W., vinyl ether obstetrical anæs-

thesia for general practice, A., III,

and Raginsky, B. B., vinyl ether anæsthesia in dogs, A., III, 217.

Bourquard, A. See Wolff, R.

Bouska, F. W., surface and tallowy

flavours of butter, B., 388. Bousky, S., and Abbott, E. J., examining surface condition of plated and polished

[metal] surfaces, B., 930 Bouson, F. W., controlled coagulation [in water purification] maintains filters

in good condition, B., 848. Bousquet, E. W. See Austin, P. R., Du Pont de Nemours & Co., E. I., and

Grasselli Chem. Co. Bousset, R., magnesium derivative of pinene hydrochloride; action of phthalic anhydride followed by magnesium ethyl

bromide, A., II, 381.

Bousn, A. E. See Eastwood, L. W.

Boutaric, $A_{\cdot \cdot}$, imbibition of hydrosols and of coloured solutions across porous substances, A., I, 132. Spectral transformations undergone by solutions of colouring matter under the influence of another dissolved substance, A., I, 182. Penetration of colouringmatters and colloidal particles through porous substances by imbibition, A., I, 361. Physico-chemical properties of serum-proteins isolated by the acetone method, A., III, 290. Soil properties in relation to colloids, B., 593.

and Baujard, F., determining the wetting power of solutions and sprays used in

agriculture, B., 708.

Boutaric, A., Ferré, L., and Roy, (Mme.) M., spectrophotometric researches on the colour of wines, B., 176. Spectrophotometric researches on dilution and mixing of wines, B., 607.

and Roy, (Mme.) M., growth of particles of a hydrosol in course of flocculation, A., I, 132. Variations in optical density and viscosity of scrum on dilution with physiological solution, A., III, 292. Spectrophotometry of aqueous solutions of bile, A., III, 417. See also Achard, C.

Bouthillier, L. P., and Gosselin, G., water fixed by marine algae in vivo, A., III, 189.

Boutillier, A., dilatometric anomalies due to external forces in copper-aluminium alloys with 7-16% of aluminium, B., 48. Boutry, G. A., photo-electric cell, A., I, 201. Boutté, A., welding nickel and its nonferrous alloys, B., 571.

Bouvier, C. See Palazzo, F. C. Bouvier, J. See Chambon, M.

Bouwers, A., Heyn, F. A., and Kuntke, A., neutron generator, A., I, 201.

Bouwkamp, C. J., and Nijboer, B. R. A., dependence on field strength of dielectric constant, and Kerr effect, A., I, 347.

Bouwman, (Mlle.) M. K. See Olivier, S. C. J.

Bouyoucos, G. J., rapid indirect determination of wilting coefficient of soils, B., 163. Dilatometer method for determining the moisture equivalent of soils, B., 1097. Sensitive hydrometer for determining small amounts of clay or colloids in soils, B., 1382.

Bovarnick, M. See Chargaff, E. Bovet, D., and Simon, Alexander, diethylaminomethylbenzodioxan (833 F.): physiological examination of the optical isomerides, A., III, 64.

and Staub, A. M., protective action of phenolic ethers in histamine poisoning, A., III, 135.

See also Fourneau, E., Nitti, F., Tré-fouël, J., and Ungar, Georges.

Bowden, A., use of soya-bean meal for

adhesive purposes, B., 818.

Bowden, F. P., and Hughes, T. P., surface temperature of rubbing solids and formation of the Beilby layer, A., I, 117. Physical properties of surfaces. IV. Polishing, surface flow, and formation of the Beilby layer, A., I, 447.

Bowden, R. C., and Parsons, J. D., washing and blending solid suspension in liquid, (P.), B., 995.

Bowditch, S. I. See Graton, L. C. Bowe, L. E. See Royster, P. H.

Bowen, C. A., and Corning Glass Works,

[glass-tank] furnace, (P.), B., 38.
Bowen, E. J., and Horton, A. T., photoreactions of liquid and dissolved ketones. III., A., I, 39. and Sawtell, J. W., fluorescence efficien-

cies of solutions of hydrocarbons, A.,

Bowen, I. S., and Cox, E. F., ionisation of air by γ -rays as a function of pressure and collecting field. II., A., I, 211. Millikan, R. A., and Neher, H. V.,

measurements of nuclear absorption of electrons by the atmosphere up to about 10¹⁰ electron volts, A., I, 440.

Bowen, N. L., high-temperature research on silicates and its significance in igneous geology, A., I, 101. Aenigmatite, A., I. 270. Bowen, N. L., and Ellestad, R. B., leucite and pseudoleucite, A., I, 433. Bower, B. H., leather product, (P.), B.,

375.

Bower, F. A. Sec De Jahn, F. W. Bower, F. W., detoxication of phenylacetic

acid by the chimpanzee, A., III, 18. Bower, J. C., Auger effect for the L level of xenon and krypton, A., I, 159.

Bower, W. L. See Neill & Co. (Sheffleld),

Bowers, J. A., determination of the basin capacity of a cupola, B., 1211.

Bowes, J. H. See Murray, M. M. Bowie, C. P., mud-lining oil and gas wells, (P.), B., 15.

Bowie, D. J., and Vineberg, A. M., selective action of histamine and effect of prolonged vagal stimulation on cells of gastric glands in the dog, A., III, 169.

Bowle, M. A. See Evans, Gerald. Bowlby, W. D., lacquered papers, B., 1036. See also Hercules Powder Co.

Bowles, J. A. C., and Partridge, H. M., rare earth salts; precipitation and $p_{\rm H}$ studies with the glass electrode, A., I, 257.

Bowles, O., asbestos, B., 1200.

Bowles, R. F., printing ink as a dynamic system, B., 810. Physical aspects of [printing] ink manipulation, B., 810. Bowling, G. A. See Landingham, A. H. V.

Bowman, A., pyrimidine derivatives, A. II, 213.

Bowman, C. See Thorn, F. C.

Bowman, D. E., and Muntwyler, E., urinary excretion of ascorbic acid in the dog following ether anasthesia, A., III, 78. Ascorbic acid of tissues after ether ancesthesia, A., III, 178.

Bowman, K. M. See Himwich, H. E.

Bowman, P. I. See Wallis, E. S.
Bowron, H. W., chlorinated diphenyl as a raw material in lacquer and varnish

industry, B., 590. Bowron, R. L., basic open-hearth slag an important by-product at the Ensley Works, B., 788.

Bowser & Co., S. F. See Lanser, A., and

Renfrew, P. B.

Box, E. R. See Powell, Alan R.

Boxer, G. See Kapeller-Adler, R.

Boy, C., determination of bismuth in ores, metallurgical products, etc., B., 573. Boyce, A. M. See Basinger, A. J. Boyce, E., disposal of brines from oil-

drilling and petroleum operations, B.,

Boyce, J. C., and Robinson, H. A., wavelength identification lists for the extreme

ultra-violet, A., I, 272
Boyce, R. D., and "Romac" Motor Accessories, composition suitable, e.g., for production of anvils or blocks for supporting sheet material from which articles are to be punched, (P.), B., 1240. Boycott, G. W. M., prevention of compressed-air illness, A., III, 134.

Boyd, E. M., blood-lipins in eclampsia, A., III, 13. Effect of thyroidectomy on blood-lipins, A., III, 75. Interrelation of blood-lipins, A., III, 112. Effect of pregnancy and pseudo-pregnancy on the blood-lipins of rabbits, A., III, 112. Lipins of blood in new-born infants, A., III, 290. Pharmacology of metasynephrin, A., III, 350. Lipinæmia following abortion, A., III, 379. Blenkinsop, G. W., and Mylks, G., jun.,

leucocytosis of parturition, A., III, 289.

Boyd, E. M., and Murray, R. B., effect of anticoagulants on blood-lipins, A., III,

Orr, J. H., and Reed, G. B., bodytemperature and plasma-lipins in rabbits, A., III, 164. Plasma-lipins in actively immunised rabbits, A., III, 451.

and Stephens, D. J., lipin content and number of white blood cells, A.,

and Stevenson, J. W., lipin content of rabbit's leucocytes, A., III, 112.

Boyd, G. A., computations related to liquid structure by methods of trial and of Fourier series analysis, A., I, 171.

Boyd, G. T., and Taubenhaus, J. J., field control of die-back and black spot [in roses], B., 1105. Effect of certain chemicals on defoliation of rose plants, B., 1105.

See also Taubenhaus, J. J.

Boyd, J. H., jun., and Atlantic Refining Co., treatment of hydrocarbons, (P.), B., 414.

Boyd, M. C. See Dietz, V. Boyd, T., and Degering, E. F., preparation

of m-tolyl isopropyl ether from m-cresol and isopropyl chloride, A., II, 412.

Boyd, T. A. Sec Campbell, J. M. Boyd, W. B. See Gould, R. E. Boyd, W. C. See Walker, B. S.

Boyd, W. L. See Palmer, L. S.
Boyd, W. M., rotenone in household insect

control, B., 846.

Boyer, F. See Fiessinger, N.

Boyer, L. See Rouslacroix, A. Boyer, R. F., and Nusbaum, C., Seeman-Bohlin X-ray camera for high temperatures, A., I, 581.

Boyland, E., and Boyland, M. E., tumour metabolism. X. Action of colchicine and B. typhosus extract, A., III, 122.

Boyland, M. E., and Greville, G. D. tumour metabolism. IX. Effect of cozymase on glycolysis in tumour extracts, A., III, 122.

and Brues, A. M., carcinogenic action of dibenzcarbazoles, A., III, 255.

Boyland, M. E. See Boyland, E.

Boyle, A. J. See Bulfer, G.

Boyle, J. L., soluble metallic derivatives of dyes, B., 652.

Boyle, J. S. W., McKenzie, A., and Mitchell, W., action of magnesium phenyl bromide on chloroacetyl chloride and related compounds, A., II, 496.

Boyles, A., freezing of cast iron, B., 917. and Samuels, M. L., unusual dendrites in sheet steel, B., 560.

Boynes, B. M., composts and fertilisers in relation to green-keeping. VII. Concentrated fertilisers: ammonium phosphate, B., 710. See also Thomas, B.

Boynton, A. J., and Brassert & Co., H. A., determining the oxygen content of gases, (P.), B., 669.

Boys, (Sir) C. V., gas calorimetry, B., 9. Boysen, O., development of microflora of Wilster Maisch cheese during ripening,

B., 80. Boysen-Jensen, P., micro-method for determining growth-substances of the A-

group, A., III, 502.

Bozarth, A. R. See Booth, H. S.

Bozler, E., and Cottrell, C. L., birefringence

of muscle and its variation during contraction, A., III, 473.

Boźoky, L. von, rotation analysis of O₃+, ²II → ²II bands, A., I, 53.

Bozonnet, E. J., inhibition of the hydrolysis of butyrylcholine perchlorate by serum in presence of geneserine, A., III,

Bozorth, R. M., ferromagnetic anisotropy in single crystals and in polycrystalline sheets, A., I, 69. Orientation of crystals in silicon-iron, A., I, 399.

and McKeehan, L. W., directions of easy magnetisation in ferromagnetic cubic crystals, A., I, 174.

See also Dillinger, J. F.

Braadlie, O., determination of lime requirements of soils, B., 1383.

Braae, B. See Blom, J.

Braam Houckgeest, J. P. W. A. van, dissociating power of chlorinated hydrocarbons, A., I, 298.

Braarud, T. See Gran, H. H.

Braaten, E. O., and Leitch, J. D., Geiger-Müller counter for detecting small amounts of radium stored in radium workers, A., III, 262.

Brabäk, J., desiccation or drying of liquid films, (P.), B., 306.

Brabec, L. B., occurrence of vitamin-B2 in rat sarcoma: vitamin-B2 content of

liver tissue, A., III, 460.

Brabender, C. W., structure of wheat and rye doughs, B., 1259. Apparatus for determination of moisture, (P.), B., 742.

Bracaloni, L., preparation of ampoules containing egg extracts (lecithin and lutein) for hypodermic injection, B.,

Braccini, P., silage making by method of Italo Giglioli (I.G.); experiments with beet leaves, B., 726. Brace, P. H. See Hansen, E. K.

Bracewell, R. S., apparatus for coating of paper, etc., (P.), B., 1325.

Brachet, J., oxidative properties of isolated

amphibian germinal vesicles, A., III,

and Shapiro, H., relative oxygen consumption of dorsal and ventral regions of intact amphibian gastrulæ: 'observations on unfertilised eggs, A., III,

Bracken, A. F. See Greaves, J. E. Brackenbury, J. M. See Upson, F. W. Brackett, W. S. See Union Carbide & Carbon Corp.

Bradbrook, E. F., and Linstead, R. P., preparation of the ten dicyanonaphthalenes and related naphthalenedicarboxylic acids, A., II, 62. Phthalocyanines. VIII. 1:2-Naphthalocyanines, A., II, 78.

Bradbury, J. T. See Bachmann, W. E. Bradbury, N. E. See Nielsen, R. A. Braddick, H. J., and Gilbert, A. W

coincidence counter measurements of cosmic rays in an aeroplane, A., I, 6.

Bradfield, A. E., Francis, E. M., Penfold, A. R., and Simonsen, J. L., lanceol, a sesquiterpene alcohol from oil of Santalum lanceolatum. I., A., II, 26. Pritchard, R. R., and Simonsen, J. L.

constitution of a-cyperone, A., II, 346. Bradford, J. A., Harlow, E. S., Harlan, W. R., and Hanmer, H. R., nature of cigarette smoke; volatile acids and bases, B., 287.

Bradley, A. J., X-ray study of the chromium-aluminium equilibrium diagram, A., 1, 454.

Goldschmidt, H. J., Lipson, H., and Taylor, A., investigation of equilibrium diagrams of ternary alloys by X-rays, A., I, 610.

Bradley, A. J., and Illingworth, J. W., crystal structure of H3PW12O40,29H2O, A., I, 68.

and Jay, A. H., lattice spacing of ironnickel alloys, A., I, 233.

and Lu, S. S., crystal structures of Cr2AI

and Cr₅Al₅, A., I, 447. and Taylor, A., X-ray analysis of the nickel-aluminium system, A., I, 356. Crystal structures of Ni2Al3 and NiAl3, A., I, 399.

See also Bragg, W. L.

Bradley, J. D. See Dragstedt, C. A. Bradley, R. S., insulating firebrick as a

furnace lining, B., 1052.

Bradley, R. Stevenson, multimolecular adsorbed films. II. General theory of con-densation of vapours on finely divided solids, A., I, 130. Rate of unimolecular and bimolecular reactions in solution as deduced from a kinetic theory of liquids, A., I, 570.

Bradley, T. F., drying oils and resins, B., 697, 939.

Bradley, W. B., determination of salicylates, A., II, 130.

See also Bachrach, W. H., Gray, J. S., and Johnson, C. A.

Bradley, W. F. See Grim, R. E.

Bradley & Foster, Ltd., Hurst, J. E., and Lewis, W. H., alloy cast irons for manufacture of chilled and grain rolls and similar eastings, (P.), B., 248. See also Rowden, W. F.

Bradshaw, M. A. See Hoffman, E. J. Bradshaw, P. J. See Larson, H. W. Bradshaw, W. N. Seo Hothersall, A. W.

Bradsher, C. K. Sec Fieser, L. F. Bradt, W. E., and Fallscheer, H. O., electrochemical oxidation of copper lactate,

A., II, 175.

and Green, J. F., interaction of selenium tetrachloride and benzene in presence of anhydrous aluminium chloride, A., II. 357.

Sec also Oaks, H. II.

Bradway, W. E., comparison of the inhibit-ory action of cations on dispersion of the cell aggregates in the sponge, Hali-

clona, A., III, 263.
Brady, J. J., and Rochel, J. H., photoelectric sensitisation of potassium by

means of hydrogen, A., 1, 3. and Sprengnether, W. F., copper sulphide photo-cell, A., I, 535.

Brady, T. See Dane, E.
Braekken, H., crystal structure of arsenic and antimony tribromides, A., I, 17.

Braeuer, E., book-binding material simulating appearance of cotton or linen, (P.), B., 335.

Bragagnolo, G., representation of composition of mineral waters, A., I, 154.

Mineral waters of Venetia; chemical and physico-chemical analysis and classification according to Marotta and Sica, A., I, 154. Mineral water of Udine; geology, analysis, and physicochemistry, A., I, 381.

and Brunetta, B., [analysis of] mineral water from Veneto [Italy], A., I, 636.

Bragaloni, L. See Vita, G. Bragdon, C. R., and Anlt & Wiborg Corp., wrinkle-finish enamel, (P.), B., 1376.

Bragdon, R.J. See Locke, A. Bragg, G.A. See Koppers Co. of Delaware. Bragg, (Sir) W. H., development of crystal analysis, A., I, 117. Recent crystal-lography, A., I, 287, 349. Crystal and the engineer, B., 853.

Bragg, W. L., alloys, A., I, 233. Exploration of the mineral world with the aid of X-rays, A., I, 382.

and Lipson, H., employment of contoured graphs of structure factor in crystal analysis, A., I, 378.

Sykes, C., and Bradley, A. J., orderdisorder transformation, A., I, 559. Bragin, S. V. See Iljin, B. V.

Brahmachari, (Sir) U. N., chemotherapy of synthetic hypnotics, A., III, 217. Brair, J. H. Sec Massee, A. M.

Bram, I., quinine test for hyperthyroidism, A., III, 257. Brambel, C. E., and Cowles, R. P., photo-

electric determination of phosphorus in estuarine waters, A., I, 325.

Brambilla, M., utilisation of residues from terpeneless essential oils, B., 497.

and Balbi, G., possible application in paint and varnish industry of types of raw and treated grape- and tomato-seed oils, B., 257. Polymerisation of tobacco-seed oil, B., 1080.

Bramer, H. von. See Eastman Kodak Co.

Bramina, L. A. See Vozdvishénski, G. S. Brammall, A., and Leech, J. G. C., geochemistry applied to the problems of silicosis, A., I, 433. Hydrolysis of rock-forming minerals, B., 927.

Leech, J. G. C., and Bannister, F. A., paragenesis of cookcite and hydromuscovite associated with gold at Ogofau, Carmarthenshire, A., I, 538. Brammer, F. E. See Ruark, A. E.

Bramsley, E. R., apparatus for determining m.p. [of coal ash], B., 311:
Branas, J., and Bernon, G., growth equilibria in the vine, B., 1387.

Branch, G. E. K., and Nixon, A. C., rates of alcoholysis of acyl chlorides, A., I, 87.

Branchen, L. E. See Carbide & Carbon Chem. Corp., and Eastman Kodak Co.

Brand, E., Block, R. J., and Cahill, G. F., eystinuria. VI. Metabolism of the hydroxy-analogue of methionine (dla-hydroxy-y-methylthiolbutyric acid). VII. Metabolism of S-methylcysteine, y-thiobutyric acid, and yy'-dithiodibutyric acid, A., III, 345.

Block, R. J., Harris, M. M., and Hinsie, L. E., preparation from urine of concentrates of follicle-stimulating hormone, A., III, 74.
Block, R.J., Kassell, B., and Cahill, G.F.,

metabolism of S-carboxymethyleysteine; use in therapy of cystin-uria and relation to methionine; cysteine ratio, A., III, 173. Cystinuria V. Metabolism of caseinogen and lactalbumin, A., III, 345.

See also Kassell, B.
Brand, K., Gabel, W., and Ott, H. [with Müller, K. O., and Fleischhauer, R.], diphensuccindene series. XIV. Derivatives of Δ^{10} -diphensuccindene, A., II, 24.

Gabel, W., and Rosenkranz, E., thiophenols. XIV. Triphenylmethane series; 3-methylthioltriphenylcarbinol, A., II, 147.

and Leyerzapi, H. W., thiophenols. XIII. 3:3'-Dimethylthiolazobenzene and derivatives of 3-nitrophenyl methyl sulphide, A., II, 144.

and Ott, H., diphensuccindene series. XV. 10-Amino-derivatives of diphensuccindan-9:12-dione, A., II, 24.

Brand, K., and Rosenkranz, E., pharmaccutically important arsenic compounds. II., A., İI, 491.

Brand, T. von, determination of nitrogen and carbon in small amounts of plankton (in sca-water), A., III, 182. Micro-modification of Pflüger's method of determining glycogen, A., II, 326.

Brandaleonc, H. See Ralli, E. P.

Brandeis, H. See Lissner, A.

Brandenberger, M. See Schwarzenbach, G. Brandenburger, H., dyeing viscose-rayon staple fibre in fast shades, B., 1195.

Brandenburger, K., German artificial substances industry and foreign cotton, B., 423. Pure moulded resins—an incompletely solved problem, B., 589. Injection of thermo-hardening plastics, B., 808. Surface technique in phenoand amino-plasts, B., 808.

Brandimarte, E. See Tonegntti, M. Brandrup, W., chemistry of the alkaloids of Chelidonium majus, B., 286.

Brandsma, W. F., and Lips, E. M. H., detection of transformations in metals in the solid state, B., 574.

Brandt, A. E. See Atanasoff, J. V. Brandt, C. W., chemistry of Phormium tenax (New Zealand flax), B., 654.

Brandt, *H. von*, high-concentration agaragar gel and combinations thereof, (P.), B., 1373.

Brandt, K. See Euler, H. von.
Brandt, K. M., photochemistry of methylene-blue, A., I, 40. See also Winberg, H.

Brandt, L. H., use of anhydrous ammonia for testing tightness of equipment, B., 735. Brandt, O., dependence of the absorption of sound in acrosols on frequency, A., I, 614*.

and Freund, \underline{H} ., separation of suspended particles, (P.), B., 308.

Freund, H., and Hiedemann, E., suspended matter in sound fields, A., I, 230.

Brandt, P. F. See Murphy, G. M.

Brandt, W., colorimetric determination of small amounts of carbamide, A., II, 394. Unknown substances in unsaponifiable fraction of blood, A., III, 3. Cancer as a metabolism problem, A., III, 58. Biological action of iodoprotein-bromocompounds on the metamorphosis of the axolotl, A., III, 137. Respiration of animal tissues; unification of two opposing theories, A., III, 302. Effect of heavy water on hydrolysis of urea by urease, A., III, 311.

Brandt, W. H., quartet states in diatomic molecules intermediate between cases

a and b, A., I, 15.

Branham, J. R., saturation by water in gas-analysis compensators, A., I, 202.

Branham, S. E., and Rosenthal, S. M., chemotherapy. V. Sulphanilamide, serum, and combined drug and serum in experimental infections in mice, A., 111, 301.

See also Rosenthal, S. M.

Branke, Y. V., and Gntt, E. F., oil from seeds of Xanthium strummarium, L., B., 1366.

Brannon, J. M., and Pollitt, R. J., presence of yeasts in fruit juices sold for beverages, B., 493.

Brannon, M. A., algæ and growthsubstances, A., III, 502.
Branson, W. R., evaluation of coal for gas

manufacture, B., 1151.

Brasack, F. See Kruger, F.
Braschnik, N. I., Malinovski, A. E., and
Skruipnikov, K. A., ignition of a methane-air mixture by electric sparks of direct and alternating currents, A., I,

Brasefield, C. J. See Pollard, E. Brasher, E. P. See Mack, W. B.

Brass, K., Beyrodt, A., and Mattausch, J., pigment of the yellow tomato, A., III,

and Gronych, O., absorption of phenols and phenol-carboxylic acids by cellulosc, A., I, 129.

Oppelt, F., and Weichert, A., carbamide derivatives and their absorption by

cellulose, A., II, 143. and Patzelt, R., 2:7:2':7'-tetrahydroxyl:1'-dinaphthyl, A., II, 338. Walder's "dinaphthyl," 1:1'-dinaphthyl, and the ultra-violet absorption of β dinaphthylene oxide, A., II, 347.

Brass, P. D. See Jordan, H. F.

Brassert, H. A., and Brassort & Co., H. A., treatment of iron ores for subsequent reduction, (P.), B., 1359. See also Brassert & Co., H. A.

Brassert & Co., Ltd., H. A., filtering apparatus, (P.), B., 994.

Brassert, H. A., and Colclough, T. P., iron, (P.), B., 455. Manufacture of steel in the basic Bessemer converter, (P.), B., 690.

Dawson, H. C., and Thomson, T., recovery of waste heat from furnace gases, (P.), B., 97.

and Fisher, A., simultaneous coking of hydrocarbons, and of mixtures of tho resulting distillates with coal, (P.), B., 113.

See also Boynton, A. J., Brassert, H. A., and Seaver, J. J.

Brassert-Tidewater Development Corporation. See Andrews, C. W., and Petersen,

Brassfield, C. R., comparison of changes in $p_{\rm H}$ of arterial blood and saliva during variations of pulmonary ventilation, A., III, 249.

Bratton, A. C., and Bailey, J. R., nitrogen compounds in petroleum distillates. IX. Nitrogen bases from California cracked gasoline, B., 204.

See also Axe, W. N., and Bernhart, F. W.

Braucke, A. vom. See under Drahtwerk Bergerhammer A. vom Braucke, jun.

Brauckmeyer, R., and Rouette, H., hydrogen peroxide treatment of wool to increase its felting and milling properties, B., 659.

Brande, S. J., motion of electrons in crossed electric and magnetic fields with space charge, A., I, 159.

Braun, conduction of heat in gases, B., 1143.

Brann, A., and Hölemann, P., refraction and dispersion of gases and vapours. X. Effect of temperature on refractivity of iodine, and refractivity of atomic iodine, A., I, 65.

Preiswerk, P., and Scherrer, P., detection of a-particles in the disintegration of thorium, A., I, 594.

See also Hölemann, P. Brann, E. See Krollpfeiffer, F. Brann, H. See Schafmeister, P.

Braun, J. von [with Anton, E., and May, W.], odour and constitution. II. Lactones, A., II, 320.

Brann, J. von [with Lute, R., Warne, K. C., Pinkernelle, W., Rohland, W., Pohl, A., Dengel, F., and Arnold, H.], action of liquid ammonia on organic halogenocompounds, A., II, 278.

Dengel, F., and Jacob, Anni [with Bahn, A.], decarboxypeptides and their derivatives. III., A., II, 281.

and Friedrich-Liebenberg, A. von, higher ωω'-dihalogeno-compounds. ΙΙ. αμ-Dibromododecane from adipie acid, A., II, 364.

and Kamp, E., preparation of aliphatic dihalogeno-compounds of high mol. wt., A., II, 270.

Kamp, E., and Kopp, J., transformations of cyclopentadiene, A., II, 404.

and Kurtz, P., $a\beta$ -unsaturated aldehydes. III. The two cyclocitrylideneacetaldehydes, A., II, 292. Esterification and hydrolysis from the viewpoint of the electronic theory of union. II., A., II. 319.

and Manz, G., fluoranthene and its derivatives. VI., A., II, 374.

Michaelis, R., and Spänig, H., tenacity of

organic radicals. X., A., II, 334.

and Nelles, J., synthesis of anthrapyridines [azanthracenes], A., II, 432. and Nelles, J. [with May, A.], now typo

of indole base, A., II, 430. and Ostermayer, H., halogen derivatives of indene, A., II, 284. Amido- and imido-chlorides of non-aromatic acids. X., A., II, 290.

and Pinkernelle, W., synthesis of spermidine and analogous triamines of the fatty series, A., II, 327.

Braun, K., use of waste sulphite [pulp] waste liquors in the soap industry. 1., B., 462. Sulphite-cellulose waste lye as raw material for preparation of pale soaps, B., 585. Use of sulphite [-cellulose] waste lye in the soap industry, B., 1232.

Braun, M., coating [steel] pipes with copper, (P.), B., 249.

Braun, M. L., after-effect or "drift" in rubber under constant load, B., 473. Effect of temperature on stretched rubber bands, B., 592.

Braun, P., Rhodia-Zellwolle [acetate rayon staple fibre], B., 1033. See also Lohmann, Heinrich.

Braun, W., and Pfundt, R., production of bakers' yeast by the aeration method, B.,

Braunbek, W., energy and impact principles of collisions between particles resulting in radiation and pair formation, A., I, 214. Empirical accuracy of mass-energy ratios, A., I, 546.

Braune, H., and Pinnow, P., molecular structure of inorganic fluorides from electron diffraction measurements, A., I,

Brauns, D. H., empirical relation between the atomic dimensions and m.p. and sublimation points of the inert gases, halogens, and elements of the sulphur group, A., I, 21. Optical rotation and atomic dimensions for the four optically active a-halogeno-β-methylbutanes, A.,

Brauns, F. E., and Lewis, H. F., [cellnlose] fibre structure: physical and chemical characteristics of skin substance or

cementing material, B., 1187.

Brauns, O., possibility in the sulphite pulping of jack pine, B., 425.



Brauns, R., sanidinite and sanidin rocks, A., I, 52.

Braunschweiger Hüttenwerk G.m.b.H., welding of alloys to metal articles, (P.), B.,

Braunsdorf, K., phosphatide content of cacao powder and cacao butter and determination of lecithin substitutes in cacao products, B., 493.

Brannstein, A. E., specificity of the salicylaldehyde reaction [for pyruvic acid] of Csonka-Straub, A., II, 440.

and Kritzmann, M. G., formation and breakdown of amino-acids by intermolecular transfer of the amino-group, A., II, 448. Production of amino-acids by intermolecular transfer of aminogroups. I. Metabolism of l(+)-glutamic acid in muscle, A., III, 210. Braver, J. See Kritchevsky, W.

Bravo, G. A., mangrove (Rhizophora mucronata) of Italian Somaliland, B., 475.

Brawley, R. E., $p_{\rm H}$ of normal resting saliva. II. Diurnal variation. III. Effects of vitamin-A and -D in school children, A., III, 120.

Bray, J. L., lead coating of steel, B., 567. Bray, M. M. See Hawks, J. E.

Bray, P. D., Thompson, R. A., and Shyr, J. fractionation of mechanical pulps and its relation to refining, B., 426.

Bray, R. H., chemical and physical changes in soil colloids with advancing development in Illinois soils, B., 375. Significance of particle size within the clay fraction, B., 1050. Significance of weathering loss of potassium and magnesium in soil colloids from Illinois soils, B., 1099. Calibrating soil tests for available potassium, B., 1099.

Grim, R. E., and Kerr, P. F., application of clay mineral technique to Illinois

clay and shale, A., I, 636.

See also Grim, R. E. Bray, U. B. See Union Oil Co. of California.

Brayshaw, S. N., and Rushton, F., apparatus for production and supply of gaseous atmospheres for use in heat treatment of metals, (P.), B., 147.

See also Brayshaw Furnaces & Tools. Brayshaw Furnaces & Tools, Ltd., Brayshaw, S. N., and Rushton, F., production and use of neutral or approximately neutral gaseous atmospheres, or reducing atmospheres, (P.), B., 14.

Brazda, F. G. See Siehrs, A. E. Brdička, R., polarographic studies with the dropping mercury cathode. LXV. Catalytic effect due to $\beta\beta'$ -dichloroethyl sulphide (mustard gas), A., I, 311. Application of polarographic effect of proteins in cancer diagnosis, A., III, 205. Polarographic investigations in serological cancer diagnosis, A., III, 342.

and Tropp, C., polarographic investigations of blood-pigments and their derivatives. I. Activation of hydrogen peroxide by hæmoglobin and hæmatin, A., III, 163.

See also Haurowitz, F. Breadner, R.L. See Gen. Electric Co. Breazeale, D.F. See Bird, E.W.

Brecht, P. See Schoen, M. Brecht, F., influence of growth-substanceand acid-pastes on growth of Avena and Helianthus seedlings and its dependence on the oxygen content of the air, A., III. 49.

Brecht, W., and Pfretzschner, H., relation between the filler content of papers and their technological properties, B., 125, 656.

Schmid, F., and Vieweg, R., charging of paper with electricity, B., 771.

Breckpot, R., quantitative spectral analysis of lead, tin, and cobalt, A., I, 426. and Körber, W., quantitative spectral analysis of zinc, B., 144.

See also Thoreau, J.

Breddin, H., extracts from agrumen pericarps and their correct treatment, B.,

Bredée, H. L., artificial textile fibres from cellulose (artificial silk and cel fibre), B., 655.

and De Booys, J., viscosity-concentration relations of colloidal solutions. I. Critical valuation of viscosity-concentration formulæ. II. Classification of colloids according to shape of particles, A., I, 303.

Bredemann, G., and Radeloff, H., elimination of smoke damage, B., 989.

Bredereck, H., Beuchelt, H., and Richter, G., phosphatase activity of emulsin, A., III, 32.

and Fritzsche, E., isomeric di- and trinitrophenylhydrazones, A., II, 287.

and Papademetrin, T. [with Rothe, G.], carbohydrates and furfuraldehyde. III. Reactions with a-methylgalactoside, sorbitol, and mannitol, A., II, 230.

Bredig, M. A. See Dammann, E., and Franck, H. H.

Bredt, $J_{\cdot \cdot}$, enclisation of β -ketonic acids and absence of their ketonic decompositions in accordance with Bredt's rule, A., II, 291.

[with Demeure, F.], desmotropic rearrangements of camphoronic acid derivatives; constitution of camphoranic and isocamphoranic acids, A., II, 461.

Breed, R. S., controlling bacteriological condition of market milk, B., 488.

Breen, J., Keane, J., and Nolan, T. J. chemical constituents of lichens found in Ireland-Pertusaria concreta, Nyl., form Westringii, Nyl., A., II, 462. See also Kennedy, G.

Breidigam, F. T. See Near, H. B.

Breirem, K., maintenance metabolism of growing pigs, A., III, 466.

Breit, G., approximately relativistic equations for nuclear particles, A., I, 214,

Condon, E. U., and Present, R. D., scattering of protons by protons, A.,

and Feenberg, E., possibility of the same form of specific interaction for all nuclear particles, A., I, 6.

and Stehn, J. R., comparison of protonproton and proton-neutron interactions, A., I, 595.

Stehn, J. R., and Condon, E. U., photoelectric effect of the deuteron, A., I, 105.

and Wigner, E., disintegration of Li, A., I, 276.

See also Share, S., and Wigner, E. Breitenbach, J. W., thermal polymerisation

reactions, A., I, 366. and Jorde, W., kinetics of thermal polymerisation reactions, A., I, 522.

and Rudorfer, H., thermal polymerisation of styrene in solution, A., I, Breitenfeld & Scholz Eisengiesserei & Maschinenfabrik Ges.m.b.H., furnaces for drying sand, etc., (P.), B., 990.

Breiter, S., determination of traces of arsenic in biological material with Penicillium brevicaule, A., III, 34.

Breitling, K. See Rammler, E.
Breitmann, W. M., investigating timetemperature effects on the properties of reactants, A., I, 621.

Breitwieser, A., density of liquid and solid bodies, A., I, 71.

Breivogel, P. J., calcium salts of sub-

stituted quinolinecarboxylic acids, (P.),

Brejneva, N., Roginski, S., and Schilinski, A., introduction of radioactive halogen into organic molecules, A., I, 142; II, 224. Velocity of exchange of solvate molecules as determined by experiments with radioactive halogens, A., I, 466. Catalytic transfer in the isotopic exchange of bromine, A., I, 624.

Brekhus, P. J. See Armstrong, W. D.

Brem, R. See Seek, W.

Bremer, E. W., [silver] electrical current conductor, (P.), B., 1075.

Bremer, H., control of onion smut, B., 823. Bremer, O., reactivity of methoxy-derivatives of 3-nitropyridine and new derivatives of 3:4-pyridinopyrazine, A., II, 305. Pyridino-3:4-triazoles. II., A., II,

Bremner, H. J., and Clark, R. H., effect of hormones and bios extracts on amylase

activity, A., III, 67.

Bremond, E., complete balance sheet and distribution of ionisable substances contained in wines, B., 384.

Bremond, P., heat and ceramics, B., 38. Influence of conductivity on the internal heating of a refractory and its effect on its pyrometric resistance, B., 1206.

Bren, B. C., and Dupont Viscoloid Co., laminated [gramophone] record, (P.), B., 63. Compound [arylsulphonalkoxyalkylamides] and [plastic] compositions containing same, (P.), B., 261.

Brenaizen, O. M. See Zosimovitsch, D. P.
Brenard, G. See Mund, W.
Brenchley, W. E., boron and the control of

plant disease, B., 602. Deficiency

diseases of crop plants, B., 713. Brend, M. A. See Sherwood, T. C.

Brender à Brandis, G. A., petrographic examination of coal, B., 1151.

Brennan, E. A., and Hull, W., lubricant containing ψ -pimaric acid, (P.), B.,

Brennan, J. B., electrolytic device [condenser], (P.), B., 694. Brennan, J. J., Mitchell, D. F., Tierney,

F. P., and Thompson, W. C., fusibility of coal ash, B., 404.

Brenner, A., determination of copper in pure aluminium, B., 450. Magnetic method for measuring the thickness of nickel coatings on non-magnetic

base metals, B., 923. and Wechtel, F., occurrence of copper in primary aluminium, B., 1357.

Brenner, M. W., and Poland, G.

laboratory gas-washing or absorption unit, A., I, 635.

Brenner, W., suitability of the corneal epithelium of the frog for detection of mitogenetic radiation from blood, A., III, 453.

Brennert, S., testing resistance of stainless steels to local corrosive attack, B., 792. Brenschede, W., electromagnetic piston pump, A., I, 100. Steric factor in reactions in solutions, A., I, 522.

and Schumacher, H. J., decomposition of acetaldehyde catalysed by bromine, A., II, 176.

See also Bodenstein, M.
Brentano, J. C. M., X-ray goniometer
using beams of large aperture for photographically recording crystalpowder reflexions, A., I, 152. See also Baxter, A.

Brenzinger, J., and Ams Chem. Eng. Corp., spinning machine for rayon or other synthetic material, (P.), B., 28.

Brereton, J. G. Sec Herrington, B. L. Breshneva. See under Brejneva.

Bresler, S. E., and Pochil, P. F., structure of surface layers of liquids and films, A., I, 511.

See also Berdennikov, V. P. Bresnick, H., medicinal preparations [containing fish-liver oils], (P.), B., 621*.

Bretey, J. See Negre, L.

Bretschger, M. E., and Buffalo Electro-Chem. Co., container for hydrogen peroxide, (P.), B., 1047.

Bretschneider, H., and Burger, G., apparatus for micro-hydrogenation by a volumetric method, A., I, 267. See also Hückel, W.

Bretschneider, L. H., and De Wit, J. J. D., successive hormone effects: active substance in urine -> ovary -> oviduct in Rhodeus amarus, A., III, 437.

Bretsznajder, S., preparation of pure aluminium salts from clays and kaolins. II. Removal of iron from aqueous aluminium sulphate by means of aluminium hydroxide, B., 541. See also Zawadski, J.

Brett, C. C., Weston, W. A. R. D., and Booer, J. R., seed disinfection. III. Germination of peas; seed protection by use of disinfectant dusts containing

mercury, B., 271.

Brett, C. W., use of welding in chemical production, B., 1352. Brettner, P. See Roscheisen, P.

Breuer, F., operation of analytical microbalances highly sensitive to temperature changes, A., I, 480. Electric heating apparatus, A., I, 533. Modified micro-Dumas nitrogen deter-mination with readily available air-

free carbon dioxide, A., II, 358. Kratky, O., and Saito, G., micellar structure and deformation processes of fibrous substances. IV., A., I, 515. Breusch, F. L., absorption of fats and dialysis of fatty acids, A., I, 562.

Brewer, A. K., determination of at. wts. of lithium, potassium, and rubidium from isotope abundance measurements, A., I, 542. Radioactivity of potassium and geological time, A., I, 543. Abundance ratio of isotopes of potassium in animal tissues, A., III, 251.

and Baudisch, O., isotopes of potassium and lithium in Saratoga mineral water and cryptozoon, A., I, 584.

Brewer, G., influence of diallylmalonylurea on metabolic response of the cat to dinitrophenol, A., III, 26. Erythrocyte reaction of the dog to cobalt, A., III, 389.

Brewer, J. E. See Gardner, G. S. Brewer, N., and Sharples Specialty Co., [centrifugal] separation of solids from liquids, (P.), B., 1147.

Brewer, R. E., and Atkinson, R. G., plasticity of coals; its measurement and relation to quality of coke produced, B., 102. See also Atkinson, R. G.

Breyer, B., theory and pharmacological and chemotherapeutic action of auxochromes. II., A., III, 178.

Breyer, H., testing the weather- and frost-

resistance of natural stone, B., 556. Brian, E. W., Schechter, H. J., and Persons, E. L., unusual glycogen storage in a case of diabetes mellitus, A., III, 256. Brian, J. C. See Simon, Ltd., H.

Briau, A., determination of mixtures of [sodium] sulphite, thiosulphate, and carbonate, A., I, 197.

Brice, B. A., compensating circuit for blocking-layer photo-electric cells, A., I, 535.

See also Keane, J. C.

Brice, B. F., and Brice, P. B., moulded cementitious materials, (P.), B., 1240.

Brice, P. B. See Brice, B. F. Brice, R. T., sealing β -magnesia windows into steel spectroscopic absorption furnaces and a needle valve for controlling evacuation of such furnaces, A., I, 429.

Brick, R. M., Phillips, A., and Smith, A. J., quenching stresses and precipitation reaction in aluminium-magnesium alloys, B., 51.

Brickwedde, F. G., and Scott, R. B., deviations of ortho- and para-hydrogen from the laws of ideal solutions, A., I,

See also Scott, R. B., and Silsbee, F. B. Bricout, P., principles of magnetite testing [of steels], B., 921.

Bridge, F. See Potts, T. T.
Bridge, J. F. See Barber, J. H., and
Hatfield, W. H.

Bridge, W., Crocker, A. J., Cubin, T., and Robertson, A., synthesis of rotenone and its derivatives. XIII., A., II, 465.

Heyes, R. G., and Robertson, A., synthesis of rotenone and its derivatives. XII. 2:2-Dimethyl-△3-chromen residue of toxicarol, A., II, 162. See also Bell, (Miss) J. C.

Bridgeman, J. A. See Bridgeman, W. A. Bridgeman, W. A., and Innis, Speiden & Co., treating plant ma-

terial, (P.), B., 1391. Bridger, G. L., alinement chart for converting weight fraction into mol. fraction, B.,

Bridges, C. B., vapour method of changing reagents and of dehydration, A., II, 287.

Bridges, R. W. See Churchill, H. V. Bridgman, P. W., shearing phenomena at high pressure of possible importance for geology, A., I, 101. Polymorphic transitions of inorganic compounds to 50,000 kg. per sq. cm., A., I, 352. Flow phenomena in heavily stressed metals,

Bridgman, W. B., and Williams, John Warren, polar group orientation in linear polymeric molecules; ω-hydroxydecoic acids, A., II, 398.

Bried, E. A., and Hennion, G. F., dialkylacetylenes, A., II, 362.

Briegleb, G., and Lauppe, W., Raman spectra of molecular compounds. II. Elimination of "degeneracies" of normal vibration frequencies by angular symmetry deformations in intermolecular interaction, A., I, 219. Raman spectra of oxonium compounds, A., I, 497.

Briegleb, G., and Lauppe, W., constitution of oxonium compounds; Raman spectra of acid additive compounds of simple aliphatic alcohols and ethers, A., I,

Briel, C. G., and Cinema Development Co., photographic mats, (P.), B., 1410. Brier, B. See Solomon, F.

Bries, R., and Schulmann, W., effect of phosphates on the scale in sugar-factory evaporators, B., 1112.

Brieu, T. See Santenoise, D.

Briganti, A., hypoglycæmic action of liver extract, A., III, 24.

Briggs, C. W., solidification and contraction in steel castings. V. Contraction studies, B., 1213.

Briggs, G. E. See Bald, J. G.

Briggs, G. H., absolute velocity of aparticles from radium-C', A., I, 58. See also Goldhaber, M.

Briggs, H. B. See Imperial Chem. Industries, and Ives, H. E.

Briggs, J. Z. See Müller, W. J. Briggs, L. H., mercury seal for stirrers, A., I, 333. Apparatus for extraction of liquids with immiscible solvents of greater density, A., I, 380. Identity of dacrene and sciadopitene with phyllocladene, A., II, 109. Identity of a-dihydrophyllocladene with iosene, A., II, 346. Solanine-s, A., II, 435. Essential oil of Phyllocladus alpinus, B., 619.

and De Ath, G. C., synthesis of dihydrocarbostyril and homodihydrocarbostyril by ring enlargement and a synthesis of tetrahydroquinoline, A., II, 210.

and Frieberg, A. F., resinol of Olea Cunninghamii (Maire), A., II, 159.

See also Anderson, A.R.Briggs, S.W., and Gilbert, C.G., oil-

filtering element, (P.), B., 1305.

Briggs & Sons, Ltd., W., and March, G. A.,
waterproofing and lining tunnels and other structures, (P.), B., 788.

Brigham, E. H. See Stover, O. H. Bright, H. A., determination of sulphur occurring as sulphide in Portland cement, B., 442.

See also Thompson, I. G.

Bright, W. M., and Miller, E. L., salt bridge for electrometric measurements,

Brill, R., quantitative determination of lattice disturbance from Debye-Scherrer photographs, A., I, 399.

Brillouin, L., thermal agitation in liquids, A., I, 125. Specific heat of liquids and their constitution, A., I, 293.

Brimley, R. C., automatic control for currents of gas under moderately reduced pressures, A., I, 267.

Brindeau, A., Hinglais, H., and Hinglais, M., chemical fractionation of the prolans with formaldehyde, A., III, 40. Gonadotropic hormone and incoercible vomiting in pregnancy, A., III, 151.
Brindle, H., and Waterhouse, C. E., deter-

mination of mercury and its compounds,

A., I, 47. Brindley, G. W., widths and shapes of X-ray

lines reflected from flat powder layers, A., I, 436.

and Hoare, F. E., diamagnetism of salts in aqueous solution, A., I, 131.

and Ridley, P., asymmetry in metals of hexagonal structure, A., I, 553. See also Hoare, F. E.

Briner, E., and Frank, D., ozonisation of maleic anhydride; production of a very explosive ozonide, A., II, 440.

and Perrottet, E., analysis of very dilute ozone. I. II. Determination of ozone concentration in the air at Geneva. III. Sensitising action of the per-acid present in the aldehyde; ozone content of the air at different altitudes. A., I, 260, 324, 631. Deozonisation of air and oxygen; properties of de-ozonised air and oxygen, A., I, 321. Ozono as oxidising catalyst. IX. Analysis of very dilute ozone. IV. Study of reactions by the amount of oxygen absorbed, A., I, 624. Perrottet, E., Paillard, H., and Susz, B.,

dielectric constants of ozonides of ethyl fumarate, ethyl maleate, and methylisoeugenol, and variation of these constants with time, A., I, 65. Dielectric constant and dipole moment of ethyl malcate and fumarate and their ozon-

ides, A., I, 396.

See also Susz, B. Brink, R. A., and Roberts, W. L., coumarin content of Melilotus dentata, A., III, 331. Brinker, F. A., flotation of copper sulphides with nickel activators, (P.), B., 690

Brinkman, H., continuously acting cloudchamber, A., I, 152.

Brinkman, R., bio-catalysis. I.—III., A., III, 207.

and Jonxis, J. H. P., alkaline resistance and spreading velocity of feetal and adult types of mammalian hamo-

globin, A., III, 335.
Brintzinger, H., ascorbic and isoascorbic acids as reducing agents for preparing colloidal solutions of gold, palladium, platinum, silver, selenium, tellurium, molybdenum-blue, and tungsten-blue, A., I, 133. Ionic and mol. wts. by dialysis, A., I, 429.

and Beier, H., membrane or frits for measurements by the dialysis method, A., I, 267. Diasolysis, A., I, 408. Rubber, cellulose acetate, nitrocellulose, synthetic resins, and similar materials as solvents. I. Maximal solvent capacity of rubber of different degrees of vulcanisation for isomeric nitrophenols, B., 949.

and Eckardt, W., dialysis method. V. Influence of foreign electrolyte con-centration on magnitude of dialysis coefficient, A., I, 307. System sodium thiosulphate-silver thiosulphate in the dissolved and crystalline state, A., I,

307.

and Jahn, F., capacity of complex cations to form double shell complex compounds; single and double shell complex ions of triferric-, tricobaltic-, and trichromic-hexa-acetate-dihydroxy-ions in solution, A., I, SI. Complex compounds with two co-ordination shells from hexamminechromic and triethylenediaminechromic ions, A., I. 94. Uninuclear tripropylenediaminechromic ion, binuclear tripropylenediaminecobaltie ion, their sulphato-, oxalato-, phosphato-and arsenato-complexes, A., I. 184. Two-shell ferrocyanide complex compounds, A., I, 241. Composition of dissolved single particles of sodium uranyl acetate, sodium zinc uranyl acetate, and sodium magnesium uranyl acetate, A., I, 307.

Brintzinger, H., and Ratanarat, C., complex aquo-arsenate ions with several shells [of solvent molecules], A., I, 78.

Briod, A. E., and Nat. Oil Products Co., controlling the oxidation of certain organic compounds, (P.), B., 1083.

Briolay. See Bertrand, G.
Brioux, C., and Jouis, E., cultivation of flax fibre in the Lower Seine; absorption of the principal fertiliser constituents, B., 599. Diacetyl in Normandy butter, B., 1399.

Briscoe, G., antagonism between curarine and acetylcholine, A., III, 135.

Briscoe, H. V. A., and Mathews, (Miss)
J. W., dangerous dusts; collection of samples for analysis, B., 1286.

Matthews, (Miss) J. W., Holt, P. F., and Sanderson, (Miss) P. M., characteristic properties of certain industrial dusts, B., 852. Sampling of industrial dusts by means of the "labyrinth," B., 853.

See also Anderson, J. S., Bashford, L. A., Emeléus, H.J., James, F.W., Jevons, W., and Matthews, (Miss) J. W.

Briske, P. See under Briske & Prohl. Briske & Prohl, and Luschenowsky, A., purification and refinement of magnesium and magnesium alloys, (P.), B., 252. Purification and refinement of alloys of magnesium and aluminium, (P.), B., 252.

Brissaud, L., action of sodium hypoiodite on cellulose, A., II, 447. Oxidation of cellulose in a heterogeneous medium, A., II, 447. Gelatinising action of solutions [on cellulose acetate], B., 1320.

British Acoustic Films, Ltd. See Rowlands, R, E.

Brit. Aluminium Co., Ltd. See Pullen, A. N. D. Brit. Arca Regulators, Ltd., and Lindsay,

T., automatic control of absolute pressures, (P.), B., 308.

Brit. Bemberg, Ltd., artificial silk, (P.), B., 429

Brit. Celanese, Ltd., artificial filaments, yarns, straw, etc. [of reduced lustre], (P.), B., 28. [Stable] esters of cellulose, (P.), B., 28. Concentration of aliphatic acids, (P.), B., 213. Coated flexible sheet materials, (P.), B., 234. Treatment of thermoplastic materials, (P.), B., 262. [Pigmented] artificial filaments, yarns, and similar materials, (P.), B., 334. Treatment of mixed textile materials [for hydrolysis of cellulose ester rayon present therein], (P.), B., 337. [Apparatus for] treatment of textile materials, (P.), B., 337. Fabrics and articles of wearing apparel, (P.), B., 338. Stiffened fabrics and articles made therefrom, (P.), B., 338, 433. Oxygenated organic compounds, (P.), B., 418, 525. Mixed fabrics, (P.), B., 428. [Twisted] crêpe threads and fabrics containing filaments of cellulose esters or ethers, (P.), B., 429. Coloration of materials, (P.), B., 433. Manufacture [lubrication and weighting] of artificial textile materials, (P.), B., 433. Lubricating compositions, (P.), B., 520. Colouring compositions, (P.), B., 899. Colouring compositions [for cellulose acetate], (P.), B., 899. Stiffened fabrics and articles of wearing apparel, (P.), B., 900. Shaping of textile materials, (P.), B., 1194. Treatment of textile articles in baths, (P.), B., 1196. Condensation products and cellulose derivative compositions containing them, (P.), B., 1240.

Brit. Celanese, Ltd., manufacture or treatment of cellulose derivatives, (P.), B., 1323. Finishing of composite materials having a textile base, (P.), B., 1329. Stiffened fabrics and fabric articles, (P.), B., 1331. Thermoplastic compositions containing an organio derivative of cellulose, and articles coated or impregnated therewith, (P.), B., 1373.

Daly, A. J., and Lowe, W. G., artificial filaments, ribbons, etc., (P.), B.,

and Dreyfus, H., formation and use of staple products from continuous filaments, (P.), B., 772.

Dreyfus, H., and Dickie, W. A., [figured or relief] fabrics, (P.), B., 430.

Dreyfus, H., and Groombridge, W. H., acetylene, (P.), B., 113, 1310.

Dreyfus, H., and Moncrieff, R. W.,

saponification of cellulose ester filaments, threads, ribbons, and similar materials, (P.), B., 28. Treatment [hydrolysis] of cellulose acetate and other organic esters of cellulose, (P.), B., 127. Crêpe yarns, (P.), B., 229.

Dreyfus, H., Moncrieff, R. W., and Hill, F. B., artificial filaments, yarns, etc., (P.), B., 895. Artificial textile materials, foils, films, etc., (P.), B.,

Dreyfus, H., and Taylor, W. I., [voluminous] artificial yarns, (P.), B., 429. Ellis, G. H., and Kirk, E. W., treatment

of textile materials, (P.), B., 31.

Finlayson, D., and Bezant, R., crêpe fabrics, (P.), B., 1324.
Finlayson, D., and Crawshaw, H., stiffened fabrics and fabric articles, (P.), B., 434.

Finlayson, D., and Latham, L., yarns containing staple fibre from yarns composed of continuous filaments, (P.), B., 1038. Crimping of threads, (P.), B., 1322.

Finlayson, D., and Perry, R. G., treatment of textile materials, (P.), B.,

Groombridge, W. H., and Dee, T. P., manufacture of acetaldehyde by hydration of acetylene and production of a catalyst for use in this process, (P.), B., 649.

Lord, G., and Reeves, G., amino-compounds of the anthraquinone series, (P.), B., 328.

Mellor, A., Bingham, G., and Pool, W., incorporation of organic substances [dyes] in textile and other materials cellulose esters or ethers], (P.), B.,

Mellor, A., and Pool, W., drying of [fabric] materials, (P.), B., 1333. and Miller, B. E. M., effects in films,

sheets, and similar materials, (P.), B., 229.

Moncrieff, R. W., and Hill, F. B., manufacture or treatment of artificial filaments, threads, yarns, and similar materials, (P.), B., 1324.

Moncrieff, R. W., and Miller, P. H.,

treatment of textile materials, (P.), B., 231. Device for cleaning rotating

cylinders, (P.), B., 302.

Moncrieff, R. W., and North, C. W., treatment of cellulose ester threads, ribbons, films, fabrics, and similar materials, (P.), B., 775. Brit. Celanese, Ltd., and Moss, W. H., sulphonamide compounds, (P.), B., 65. Printing inks, and printing of artificial foils, films, etc., (P.), B., 159. Shaped articles of cellulose derivatives, (P.), B., 895.

Olpin, H. C., and Ellis, G. H., ornamental effects on materials containing organic derivatives of cellulose, (P.),

B., 776.

Page, R., and Thomas, E. B., methane, (P.), B., 647.

and Rivat, G., printing and other textile

treatments, (P.), B., 130.
Rooney, J. H., and Hawtin, P. R., films, foils, ribbons, etc., (P.), B., 772.

and Sowter, P. F. C., coloration of textiles and other materials, (P.), B., 337, 433.

Stanley, E., Olpin, H. C., and Riley, R. H. J., lubrication and tinting of

textile materials, (P.), B., 773.

Thomas, E. B., and Oxley, H. F., derivatives of cellulose and other polymeric hydroxy-compounds, (P.), B., 535. Aliphatic acid nitriles, (P.), B., 526.

Wainwright, J. A., and Allan, J., coloration of textile materials containing cellulose esters, (P.), B., 232. and Walker, W., composite sheet material [for heat insulation], (P.), B., 1287.

Brit. Cellophane, Ltd., moisture proofing compositions and articles produced therefrom, (P.), B., 900. Drying of webs that are subject to shrinkage during drying, (P.), B., 1325.

Brit. Coal Distillation, Ltd., Hardy, R. D., Machen, C., and Aram, E. H. G., distillation or heat treatment of solid carbonaceous materials and apparatus therefore, (P.), B., 1300.

Brit. Driver-Harris Co., Ltd., electrical resistance alloys, (P.), B., 933.

and Kay, W. M., electrical resistance alloys, (P.), B., 456.
 Brit. Non-Ferrous Metals Research Associ-

ation, Hanson, D., Slater, I. G., and Parker, R. T., casting of aluminium and its alloys, (P.), B., 359.

Brit. "Rema" Manufacturing Co., Ltd.,

and Howden, P., pulverising plant, (P.), B., 740.

Brit. Rubber Manufacturers Research Association, Porritt, B. D., and Scott, J. R., apparatus for testing materials, (P.), B., 513.

and Scott, J. R., abrasion-resistant rubber articles, (P.), B., 815.

Purification of graphite, (P.), B., 3.
Purification of graphite, (P.), B., 13.
Electric welding electrodes, (P.), B., B., 21. 54. Welding electrodes, (P.), B., 55, 692. Electric-discharge devices, (P.), 692. Electric-discnarge devices, (1., B., 56, 803, 1075. Mercury-vapour generators, (P.), B., 97. Electric-discharge lamps, (P.), B., 149, 582. [Alkyd] resin films, (P.), B., 158. Mercury boilers, (P.), B., 197, 629. Treating [annealing] iron powder, (P.), B., 248. Inhibiting chemical reactive capa-248. Inhibiting chemical reactive capacity of ferromanganese for use in welding rods], (P.), B., 249. Fluxes for brazing, (P.), B., 250. Metallic articles [dies for stamping], (P.), B., 357. Coating of metallic surfaces for prevent wetting with oil], (P.), B., 358.

Brit. Thomson-Houston Co., Ltd., Electric insulation [for cables], (P.), B., 361. Insulation of magnetic powder for mass cores, for highfrequency purposes, etc., (P.), B., 362. Electrolytic capacitance devices, (P.), B., 362. Electric arc-discharge devices, (P.), B., 362. Apparatus for detecting presence of mercury vapour or other impurities in the atmosphere, (P.), B., 398. Apparatus for producing a reducing gas atmosphere by partial combustion of gaseous hydrocarbons, (P.), B., 410. Sintered hard carbide composition, (P.), B., 457. [Automatic apparatus for] electric welding, (P.), B., 459. Dielectrics for electrical apparatus, (P.), B., 460. Insulated electric conductors, (P.), B., 460, 1364. Activation of cathodes of electric-discharge devices, (P.), B., 461. Apparatus for maintaining a predetermined temperature, (P.), B., 510. Electric ovens provided with temperature-regulating devices, (P.), B., 582. [Electrode for] electric-discharge devices, (P.), B., 582. Di-electric compositions, (P.), B., 583. Electric-discharge tubes, (P.), B., 583. Glass-to-metal scals, (P.), B., 672. Electrical heating of liquids, (P.), B., 694. Pasteurising apparatus, (P.), B., 741. Sintered hard [tungsten] carbide composition, (P.), B., 801. Electrolytic devices such as capacitors, (P.), B., 803. Electrolytic condensers, (P.), B., 937. Rotary kilns, (P.), B., 990. Nozzles for atomising liquids, (P.), B., 995. Viscosity-compensated flow control, (P.), B., 1013. Permanent magnets, (P.), B., 1073, 1226. [Alloys for] permanent magnets, (P.), B., 1226. Wetting or coating one metal with another, (P.), B., 1227. Electric insulators, (P.), B., 1230. Apparatus for separating dust from air, (P.), B., 1282. Welding wires together, (P.), B., 1362. Electric [flash-]welding [of steel], (P.), B., 1363. Liquid insulating materials, (P.), B., 1364.

and Davies, L. J., electric-discharge lamps, (P.), B., 1075.

and Fairbrother, J. A. V., coating [glass] surfaces with fluorescent materials, (P.), B., 346.

Gabor, D., and Fairbrother, J. A. V., making good thermal contact between metal and ceramic material, (P.), B.,

Gen. Electric Co., and Germer, E., application of luminescent substances to the surface of a vitreous body, (P.), B., 1053.

and Germer, E., illumination resembling

daylight, (P.), B., 461. and Mayo, C. G., apparatus for detecting presence of metallic particles in non-metallic substances, (P.), B., 935.

and Read, J. C., mercury-vapour vacuum

pumps, (P.), B., 856. and Scott, W. J., electric-discharge lamps, (P.), B., 582.

Brit. Titan Products Co., Ltd., treatment of titanium bearing materials, (P.), B.,

Brit. United Shoe Machinery Co., Ltd., and Quinlivan, Q. L., treatment of absorbent fibrous material, (P.), B., 776.

Britton, A. T., modern building construction and relations of the chemist and the engineer, B., 1343. Britton, E. C. See Dow Chem. Co.

Britton, H. C. See Hayes, J. W.

Britton, S. C., properties of commercial steel sheets containing additions of copper, manganese, chromium, and phosphorus, B., 792.
and Evans, U. R., practical problems of corrosion. IX. Tests of protective painting; final report, B., 62.
Britton, S. W., and Silvette, H., survival

of marmots after nephrectomy and adrenalectomy, A., III, 206. Sodium chloride balance in the adrenalectomised opossum, A., III, 399. Comparison of sodium, chloride, and carbo-hydrate changes in adrenal insufficiency and other experimental conditions, A., III, 400.

See also Corey, E. L.

Britzke, E. V., and Hoffmann, E., weighing out small amounts of hygroscopic materials, A., I, 379.

Brinchanov, A. E., mechanism of plastic deformation [of iron wires], B., 43.

Brizard, M. J., metallic coating recovering device, (P.), B., 148. Brizon, A. See Wattebot, L.

Brizzolara, A. A., Denslow, R. R., and Rumbel, S. W., composition of zincyellow, B., 944.

Brjuschkova, K. A. Sce Goljanizki, I. A. Bro, L., clinker in furnaces; causes and remedics, B., 1141. Broadhead, C. F., dry gas, B., 201. Con-

solidation of [town] gas, B., 862.

Broadwater, C.C. See Cornell, M.Brobański, B., improvements in apparatus for centigram elementary analysis, A., I. 480.

Brobbel, L. M. See Nieuwenburg, C. J. van.

Broch, E. K., density of eigenfunctions for an electron obeying Dirac's equation, A., I, 278.

Brock, F., recovery of wool grease in the Bradford trade, B., 423.

Brock, F. H. See Hully, H. H.

Brock, J. F., relation between hypochromic anæmias and iron-deficiency, A., III, 204. Brockbank, C. J., and Soc. d'Electro-Chim.,

d'Electro-Métall. & des Aciéries Electr. d'Ugine, [graphite-silicon carbide] refractory, (P.), B., 1342.

Brockington, A. F., transparent lacquers, B., 1238.

Brocklesby, H. N., approximate composition of Canadian pilchard oil, B., 258. Brockman, C. J., alkaline plating baths containing organic amines. I. Copper plating from solutions containing diethylenetriamine, B., 797.

and Whitley, J. B., alkaline plating baths containing the ethanolamines. V. Copper plating from diethanolamino

solutions, B., 797.

Brockmann, H., antirachitic vitamin from halibut-liver oil, A., III, 156.

and Busse, A., antirachitic vitamin of the liver-oil of the blue-fin tunny, A., III, 497.

and Haase, R., dracorubin. II., A., II, 427.

and Maier, K., rottlerin, A., II, 429. Brockway, L. O., electron diffraction by gas molecules, A., I, 119. C.N linking in methyl cyanide [acetonitrile] and methyl isocyanide, A., I, 119.

Brockway, L. O., structures of chlorofluoromethanes and effect of bond type on chemical reactivity, A., I, 222. Electron diffraction investigation of the fluorochloromethanes, A., I, 448.

Anderson, J. S., molecular structures of iron nitrosocarbonyl Fe(NO)₂(CO)₂ and cobalt nitrosocarbonyl Co(NO)(CO)₃, A., I, 577.

and Cross, P. C., molecular structures of the Δ^{β} -butenes and the $\beta\gamma$ -epoxy-butanes, A., I, 119. Molecular structures of the βy-epoxybutanes; correction, A., I, 448.

See also Lévy, H. A., and Pauling, L. Broda, B., application of dye reagents to microchemical detection of magnesium in tissues and plant-cells, A., III, 334.

Broda, E., and Mark, H., surface of cellulose and its dyeing properties, B., 892.

Brode, W. R. See Griffith, M. E.Broden, K. J. See Borghetty, H. C.Broderick, F. W., relation of vitamin-D to dental caries, A., III, 342.

Broderick, S. J., Brown, E. H., and Bethlehem Mines Corp., preferential sulphatisation of complex ores, (P.), B.,

Brodersen, P. II., spectrum of calcium

oxide, A., I, 60. Frisch, P., and Schumacher, H. J., absorption spectrum of F₂O₂, A., I,

Broderson, H. J. See Standard Oil Co. Brodie, B. B., and Friedman, M. M., determination of thiocyanate in tissues,

A., III, 448. Brodie, S. S. See King, C. V. Brodska, I. A. See Mikei, I. J.

Brodski, A. E., refractometric curves and the state of dissolved strong electrolytes, A., I, 131. Present state of the theory of electrolytes, A., I, 461. Exchange of hydrogen with deuterium

in solution, A., I, 574. and Zanko, A. A., light absorption of copper sulphate in heavy water, A., I, 131. Absorption spectrum of copper sulphate in heavy water, A., I, 279. See also Scherschever, J. M., Skarre,

O. K., and Sluckaja, M. M.

Brodskis, See Miège, E. Brody, S., and Cunningham, R., growth and development. XL. Comparison of efficiency of horse, man, and motor with special reference to size and monetary economy. XXXVIII. Energetic efficiency of milk production and influence of live weight thereon. XXXIX. Relation between monetary profit and energetic efficiency of milk production, A., III, 90; B., 82.

Brömmer, A. W., dyeing of wool in acid

dyebaths, B., 660.

Brösse, W. Sec Demann, W.

Brogdon, E. Sec Hellebrandt, F. A.

Broggini, A.J. See Saegebarth, E.Broglio, N., experiences with high-frequency induction furnaces, B., 581.

Broh-Kahn, R. H. See Mirsky, I. A. Brohm, K., and Frohwein, E., detection of artificial egg-yolk pigments bleached

by acidification in ice cream, B., 490. Bromley, S. W. See Felt, E. P. Brondum, H. W., and Ray, G. B., influence

of petrol vapours on the saturation of the blood by carbon monoxide, A., III, 426.

Bronevski, A. I. See Uschakov, M. I. Bronfenbrenner, J. See Hershey, A. D. Broniewski, W., and Glotz, I. S., physical and mechanical properties of pure iron as a function of cold-working, B., 789. and Kulesza, S., mechanical properties of copper-nickel alloys, B., 1220.

Przedpelski, S., and Sulowski, S., physical and mechanical properties of very pure steel, B., 1214.

Bronkhurst, W. A. van. See Giffen, H. J. van.

Bronnikov, A. C. See Postnikov, V. F.

Brons, F. See Gorter, C. J.
Bronson, H. L., Hewson, E. W., and
Wilson, A. J. C., heat capacity of
silver and nickel between 100° and 500°, A., I, 71.

and Wilson, A. J. C., heat capacities of silver, nickel, zinc, cadmium, and lead from -80° to 120°, A., I, 71.

Bronstein, M., intensities of forbidden

transitions, A., I, 104. Anomalous scattering of electrons by protons, A., I, 106. Spontaneous disintegration of photons, A., I, 214.

Brook, E. P., [sand] pressure filters, (P.), B., 511.

Brook, G. B., and Waddington, A. G., determination of alumina in presence of metallic aluminium, B., 926.

Brooke, J. B. R., use of coke-oven and town gas in open-hearth furnaces, B.,

Breoke, W. J., Walshaw, H. R. B., and Lee, A. W., influence of coke quality on blast-furnace operations, B., 42.

Brooker, L. G. S., and Smith, L. A., cyanine dye series. VII. Dyes containing three heterocyclic nuclei, A., II, 121.

See also Eastman Kodak Co., and Keyes, G. H.

Brooker, S. G. See Worley, F. P. Brooks, A. E., and U.S. Rubber Products, [rubber-like] plastic compositions and articles made therefrom, (P.), B., 1372.

Brooks, B. T., trends in organic chemicals from petroleum and natural gas, B.,

and Standard Alcohol Co., sulphation of · mixtures of olefines, (P.), B., 1170. Brooks, C. H., and Badger, W. L., heat-

transfer coefficients in the boiling section of a long-tube, natural-circulation evaporator, B., 1284.

Brooks, C. M. See Bodo, R. C. Brooks, C. W., jun. See Du Pont de Nemours & Co., E. I.

Brooks, D. B., knock-rating [of motor fuels], B., 109.

Cleaton, R. B., and Carter, F. R., paraffin hydrocarbons from crude synthetic isooctane [ββδ-trimethylpentane], A., II, 479.

Brooks, G., phosphorescent minerals of bony tissues of frogs (Rana esculenta, L.), A., III, 294.

See also Bertrand, G. Brooks, H.J. See Asdell, S.A.

Brooks, J., action of nitrite on hæmoglobin in absence of oxygen, A., III, 370. Purple colour in shell-membrane of eggs, A., III, 416.

Brooks, J. W. See Schuette, H. A.

Brooks, S. C., selective accumulation with reference to ion exchange by the protoplasm, A., III, 407. Brooks, W. H., and Taylor, F. M., ageing

of lime putty, (P.), B., 1210. Brophy, G. R., and Parker, E. R., influence

of aluminium on the normality of steel, B., 1216.

Broquet, R., Pelshenke test and the value of wheats, B., 385.

Broser, W. See Eisner, H.

Brosi, A. R., and Harkins, W. D., abundance ratio of isotopes in natural or isotopically separated carbon, A., I, 592.

Brosset, C., crystal structure of alkali tungsten chlorides, A., I, 17. Blacken-

ing of cinnabar, A., I, 81.

Broussilovska, A. See Lazarev, N. V.

Brossman, P. D. See Dupont Viscoloid Co. Brosteaux, J., influence of calcium and magnesium ions on stability of hæmocyanin, A., III, 247. See also Putzeys, P.

Bronde, L. M. See Roshdestvenski, M. S. Brough, A. F., Puleston, P. R., and Watford Eng. Works, devices for indicating fluctuations in moisture content of paper sheets and similar materials, (P.), B., 1038.

Broughton, G., and Squires, L., gelation of bentonite suspensions, A., I, 80.

Broun, A. S., Zelenina, E. M., and Sukat-seheva, T. V., high-temperature tar of Gdov shale, B., 10.

Broun, D., modification in the action of insulin by addition of a colloidal suspension [gelatin], A., Ill, 279.

See also Tiffeneau, M.

Brous, S. L., and Goodrich Co., B. F.,
vinyl chloride, (P.), B., 524.

Brouwer, A. See De Boer, S.
Brouwer, E., effect of increasing the base excess of a ration on acid-base equilibrium, health, and yield of milch cows, A., III, 209.

and Frens, A. M., graphical aid in practical cattle-feeding. II. Calculation of a ration with given starch equivalent and digestible protein content by means of a nomogram, B., 617.

See also Frens, A. M. Brouwer, H. A., metamorphic rocks at Torne Trask (Lapland), A., I, 433.

Brovko, J. F. See Michnevitsch, G. L. Brower, P. V., and Ditto, Inc., transfer

process, (P.), B., 1242.

Browman, A. A., and Hastings, A. B., solubility of aragonite in salt solutions, A., I, 407.

Browman, L. G., effects of androsterone and testosterone on œstrous cycle of rats, A., III, 321.

Brown, A. B., and Cormack, R. G. H., stimulation of cambial activity, locally in the region of application and at a distance in relation to a wound, by means of hetero-auxin, A., III, 501.

Brown, A. F., atebrin-plasmoquin in treatment of malaria in Uganda, A., III, 419.

Brown, A. G., and Spinks, J. W. T.,

bromine sensitised decomposition of chlorine monoxide in green light, A., I,

Brown, Arthur G., and Morgan, I. C., impregnators, disinfectors, autoclaves, and other heated tanks and vessels, (P.), B., 738.

Brown, B. See Vernon, A. A.
Brown, B. A., magnesia and lime for potatoes in Connecticut, B., 598.

and Munsell, R. I., soil reactions at various depths as influenced by time since application, placement, and amount of lime, B., 1098.

Brown, B. E., and Reid, F. R., formamide and ammonium formate as nitrogen

sources for plants, B., 1101. See also Carolus, R. L., and Scholl, W.

Brown, B. H., and Lewis, H. B., cystine in normal and cystinuric human blood, A., III, 412.

rown, C. E., devices, B., 625. Brown, C. respiratory protective

Brown, C. L. See Internat. Hydrogenation Patents Co.

Brown, D. J. See Adams, L. M., and Schomaker, V.

Brown, E. E. See Roadhouse, C. L. Brown, E. H. See Broderick, S. J., and Curtis, H. A.

Brown, (Miss) E. L., and Campbell, N., qualitative organic analysis; identification of alkyl halides, amines, and acids, A., 1I, 529.

Brown, E. O. See Porter, R. H.

Brown, E. S. See Altshuler, J. A., Craise, F. L., and Standard Oil Co. of California.

Brown, F. E., and Bickford, W. G., semi-quantitative visual method for comparing electrolytic conductivities in lecture demonstrations, A., I, 537.

Brown, F. W., chemistry of natural and synthetic resins. II. Unsaturated organic compounds, B., 154.

Brown, George G., and Katz, D. L., polymerisation and what it may mean to

[the] natural gasoline industry, B., 1005. Brown, Gordon G., influence of commercial fertilisers on yields, grades, and nett value of potatoes in Hood River Valley, Oregon, **B**., 598.

Brown, G. L., action of acetylcholine on denervated mammalian and frog's muscle, A., III, 349.

Dale, H. H., and Feldberg, W., reactions of normal mammalian muscle to acctylcholine and eserine, A., III, 135.

and Feldberg, W., action of potassium on superior cervical ganglion of the cat, A., III, 133. Acetylcholine metabolism of a sympathetic ganglion, A., III, 349.

See also Bacq, Z. M.

Brown, H. See Klauder, J. V. Brown, H. D. See Wadleigh, C. H. Brown, H. F. See Cranston, J. A. Brown, H. P., m.p. bath, A., I, 534.

Brown, H. T., determination of chromium and sulphur; combined method for cast iron and steel, B., 142. Determination of sulphur and silicon [in iron and steel] by a combined method, B., 921.

Brown, I. C., and Byers, H. G., variations of soil colloids formed from similar parent materials, B., 1097.

Brown, J., machinery for mixing and compounding [rubber], B., 160.

Brown, John, dye testing for textile application, B., 660,

Brown, J. B., identification of minor component fatty acids in fats and oils, B., 153.

and Shinowara, G. Y., fatty acids. II. Preparation of pure oleic acid by a simplified method, A., II, 84.

and Stoner, G. G., fatty acids. Purification of linoleic acid by crystallisation methods, A., II, 84.

and Watts, A. S., reactions between glasses and phosphate solutions, B., 911.

Brown, J. H., and Marvel, C. S., hexa-alkylphenylethanes. III. Hexa-p-cyclohexylphenylethane and hexa-m-tolylethane. IV. Bromoalkylbenzenes, A., II, 373.

Brown, Joseph H., and Celluloid Corp., [pleated] article and material containing organic derivatives of cellulose, (P.), B., 29.

Brown, J. R. See Pettett, L. J. Brown, J. W. See Lucia, S. P.

Brown, John W., cellulose xanthate solutions, (P.), B., 127.
Brown, K. W., coagulation [in water purification], B., 191.

Brown, L. See Dow Chem. Co.

Brown, L. C. See Industrial Patents Corp. Brown, L. S., and Carlson, R. W., petrographic studies of hydrated cements, B., 552.

Brown, M., mine-timber preservation: mine fungi, B., 1209.

Brown, N. A., and Gardner, F. E., galls produced by plant hormones, including a hormone extracted from Bacterium tumefaciens, A., III, 367. See also Kraus, E. J.

Brown, N. H. See Armstrong, C. H.

Brown, O. L. I., and Latimer, W. M., heat capacity of lithium carbonate from 16° to 300° abs.; entropy and heat of solution of lithium carbonate at 298° abs.; entropy of lithium ion, A., I, 31.

and Manov, G. G., heat capacity of carbon disulphide from 15° to 300° abs.; entropy and heat of fusion of carbon disulphide, A., I, 230.

Smith, W. V., and Latimer, W. M., heat capacity and entropy of potassium permanganate from 15° to 300° abs.; entropy and free energy of permanganate ion, A., I, 31. Heat capacity of silver nitrite from 15° to 300° abs.; heat of solution at 298° abs. of silver nitrite, barium nitrate, and thallous nitrate; entropy of silver nitrite, thallous ion, nitrate ion, and nitrite ion, A., I, 364.

See also Smith, W. V. Brown, O. W. See Griffitts, F. A., and

Hatfield, J. E. Brown, P. E. See Millar, H. C., Smith,

F. B., and Walker, R. H.

Brown, R. See Moore, B. Brown, R. A. See Guerrant, N. B.

Brown, R. E., hard-facing materials and methods, B., 50.

Brown, R. F., outfall sewer inspection, Los Angeles, B., 1138.
Brown, R. H. See Mears, R. B.

Brown, R. L., and Atmospheric Nitrogen Corp., oxygenated organic compounds, (P.), B., 213. Regeneration of [spent tungsten trioxide] catalysts, (P.), B., 239.

Brown, R. R. H. See Imperial Chem. Industries.

Brown, R. S., carbon-molybdenum steel tubes for polymerisation, units operating at 649-788°, B., 1350.

See also Clark, C. L. Brown, R. W., butter-working problems, B., 723.

Brown, Ralph W. See Aluminum Co. of America.

Brown, Russell W., Osburn, O. L., and Werkman, C. H., dissimilation of pyruvic acid by Clostridium butylicum, A., III, 317.

Brown, S., collection of fly ash in the nuisance range, B., 1143.

Brown, T. B., brightness of cathodoluminescence at low current densities and low voltages, A., I, 480.

Brown, T. F. K., Chick, H. E., and Green, L. G., [apparatus for] moulding of asbestos-cement articles, (P.), B., 917.

Brown, V. See Archer, R. S., and Burns, J. L.

Brown, W. A. See Kharasch, M. S. Brown, W. B., application of fumigants to ships and warehouses. V. Distribution of ethylene oxide in barges containing dried fruit, B., 624.
Brown, W. C., Thnrston, L. M., and Dust-

man, R. B., oxidised flavour in milk. II. Effects of homogenisation, agitation, and freezing of milk on its subsequent susceptibility to oxidised flavour development. III. Time of copper contamination during processing, and aeration versus no aëration as related to oxidised flavour development. IV. Feed of cow and oxidised flavour, B., 488, 1121,

Brown, W. F., jun., variation of internal friction and elastic constants with magnetisation in iron. II., A., 1, 120. Domain theory of ferromagnetics under stress. I., A., I, 556. Variation of rigid-ity and of decrement of torsional vibrations with magnetisation in iron, A., I, 556.

Brown, W. H. See Heek, K.
Brown, W. L. See Emeléus, K. G.
Brown, W. O. See Decherd, G.
Brown, W. R., Petersee, W. E., and

Gortner, R. A., decrease in the lactose content of milk following the production of artificial hypoglycamia, A., III, 88. Effect of intravenous injections of sugar on the lactating cow, A., III, 376. Intra-mammary duet injections in the study of lactose formation, A., III, 376.

Brown, William R., and Hansen, A. E., arachidonic and linoleic acids of the serum in normal and cezematous subjects, A., III, 300.

See also Hansen, A. E. Brown Co. See Moore, H. K., Richter, G. A., and Schur, M. O.

Brown Instrument Co. See Sharp, J.

Browne, A. W. See Wheat, J. A. Browne, B. C. See Kempton, A. E. Browne, C. A., life and chemical theories of Dr. Edward Bancroft, A., I, 381. Keeping qualities of sugar-cane molasses, B., 483.

Browne, F. L., proposed system for classifying [white] house paints, B., 1238. Browne, F. S., hardiness [of apple trees] in

relation to fertiliser application, B., 824. Browne, J. S. L., and Venning, E. H., excretion of gonadotropic substances in the urine during pregnancy, A., III, 102.

See also Schacher, J., and Venning, E. H. Browning, B. L., application of micro-analysis to identification of specks in pulp and paper, B., 1188.

Browning, E., manganese and cobalt in plant and animal economy, A., III, 441.

Brownlee, A. L., Pohnan, F. J., and Galassini, J. P., dielectric measurements

on varnished tapes, B., 802.

Brownlee, I. E. See Osgood, E. E. Brownlee, D., latest methods in flue-gas analysis, B., 105. Low-temperature carbonisation and combustion [of coal], B., 637. Low-temperature carbonisation of bituminous coal, B., 862. Low-temperature carbonisation, B., 1293.

Brownmiller, L. T. See Lerch, W. Brownsdon, H. W. See Imperial Chem. Industries.

Broyer, T. C. Sec Hoagland, D. R. Brubaker, G., and Pollard, E., proportional (Geiger-Klemperer) counter, A., I, 535.

See also Pollard, E. Brubaker, M. M. See Du Pont de Nemours & Co., E. I.

Brubaker, W. M. See Bonner, T. W.

Bruce, D. S. Sec Driscoll. J.

Bruce, E. L., and Samuel, W., geology of the Little Long Lac [Gold] Mine [near Lake Superior], A., I, 483.

Bruce, J. A. See Aston, B. C. Bruce, P. L. See Blake, J. T.

Bruce, R. J., and Denley, P. G., maleic

anhydride value or diene value [of oils], B., 1367.

Bruce, T., occurrence of silicosis in manufacture of silicon alloys, A., III, 207.

Bruce, W. A., and McNatt, E. M., atomic structure and vibrations in zinc crystals. V. Diffuse scattering of Xrays at various scattering angles, A., I. 447.

See also Jauncey, G. E. M.

Bruce, W. F. [with Fieser, L. F.], carcinogenic hydrocarbons. I. 15:20-Dimethylcholanthrene, A., II, 184.

Bruce Co., E. L. See Lyons, F. H. Bruch-Willstätter, M. See Sponer, H.

Brucite Processes, Inc. See Howes, R. T. Bruck, A., dynamics of blood-cholesterol during development of avitaminosis-B in pigeons, A., III, 494.

Bruck, J. See Spath, E.

Bruckland, J. See Gas Light & Coke Co. Bruckmann, K., McKenzie, J. P., and Foulger, F., cells for electric batteries, (P.), B., 1363.

Bruckner, V., significance of fumaric acid for respiration of animal tissues. III. Interaction of oxalacetic acid, hydrazine, and nitrous acid, A., III, 59.

and Ivánovics, G., occurrence and biological production of l(-)-glutamie

acid, A., III, 357.

and Krámli, A., acetylation decomposition of asarone- ψ -nitrosite, A., II, 147. and Szent-Györgyi, A., chemical nature of citrin, A., III, 82.

See also Ivánovics, G., and Krámli, A. Brüche, E., and Mahl, H., emission from

thoriated tungsten and thoriated molybdenum. I. Thoriated tungsten, A., I, 209.

and Recknagel, A., dimension relations for electron motion in alternating fields. II., A., I, 591.

Brücke, F. T. von, choline-esterase in

sympathetic ganglia, A., III, 353.

Brückner, F. See Grubitsch, H.
Brückner, H., gas generators for motor
vehicles, B., 863. Low-temperature carbonisation of bituminous coals, B.,

and Löhr, H., utilisation of commercial gases from viewpoint of combustion technology, B., 105.

See also Bunte, K.

Brüggemann, J., carbohydrate metabolism of small ruminants; acid-base equilibrium and behaviour of blood-sugar, A., III, 306.

See also Scheunert, A.

pounds, A., I. 135.

Brüggemann, K. See Herrmann, W.

Brühl, F., structure and properties of chromium-manganese steels containing up to 1% C, 15% Mn, and 30% Cr, B., 446. Brüll, J., influence of electrolytes on hydration of some complex cobalt com-

Brüll, L., oxidation-reduction equilibrium. I. and II., A., I, I40. Preparation of osones, A., II, 7.

Brüne, comparative fertiliser investigations with basic slag and Algiers phosphate on a high-moor sand-mixture culture eighty years old, B., 478.
Brüner, H., and Grosse-Brockhoff, F.

gascous metabolism of working skeletal

muscle, A., III, 465. Brünger, K. See Fischer, W.

Brüning, [poisonous nature of] red squill, B., 846.

Bruning, A., demonstration of blood on guns and bullets, A., III, 164.

and Schnetka, M., chemical detection of traces of metal in bullet wounds, A., III, 463.

See also Meythaler, F.

Brüninghaus, L., fluorometer, A., I, 201. Brues, A. M. See Boyland, E.

Bruger, M., and Flexner, J., cutaneous absorption of insulin, A., III, 186.

Bruggeman, D. A. G., range of accuracy and values of constants in the various formulæ of Lichteneckers for mixtures, A., I, 72. Calculation of physical constants of heterogeneous substances. III. Elastic constants of quasi-isotropic mixtures of isotropic substances, A., 1, 362.

Brugsch, J. T., detection of porphyrin in

blood-serum, A., III, 109.

Bruhat, G., and Guénard, P., circular dichroism of solutions of camphor in water and in acids, A., I, I3. Circular dichroism of solutions of camphor in organic solvents, A., I, 13.
Bruhl, M. L., Ungar, Georges, and Levillain,

A., bacterial production of histamine from urea, A., III, 317.
Bruijnes, J. See Gen. Electric Co.

Bruining, H., depth at which secondary electrons are liberated, A., I, 3.

and De Boer, J. H., secondary electron emission of metals with low work function, A., I, 387.

De Boer, J. H., and Burgers, W. G.,

secondary electron emission of soot in valves with oxide cathode, A., I, 274.

Bruins, E. M., viscosity-concentration formula, A., I, 126. Cosmic rays and the earth magnetic field. II., A., I, 491. See also Clay, J.

Bruins, P. E., application of furfural[dehyde] and its derivatives to manufacture of plastics, B., 698.

Bruins, P. F., production of uniform test films of shellac and other finishes, B., T088.

Bruk, A. S., rapidity of lump coke combustion, B., 8. Cracking tendency of coke and its determination, B., 312.

and Afanasiev, M. V., connexion between conductivity and quality of coke, B., 104.

Bruker, A. B., complex compounds formed by reaction between phenyldichlorostibine and benzenediazonium chloride, A., II, 220.

Brukl, A., electrolytic separation of bivalent ytterbium, A., I, 144. Sec also Noddack, IV.

Brukner, B., barium chloride method for determining the end-point of second saturation [of sugar-beet juices], B., 716, 827.

and Wenz, F., barium chloride method for determining the end-point of second saturation [of sugar-beet juices], B.,

Brull, L., hypophysectomy and urinary excretion of phosphorus, A., III, 230. Heart-lung-kidney preparation with coagulable blood, A., III, 453. See also Ciusa, R.

Brull, R. See Kauffmann-Cosla, O. Bruma, R., polyvinyl and polyacryl resins,

Brummack, W., action of slow positive ions on metal surfaces, A., I, 338.

Brun, G. C., cholesterol content of human red blood corpuscles, A., III, 1.

Brun, M. O. Seo Vladimirov, L. V. Brunauer, S. Seo Emmett, P. H.

Brunck, O., rhodium and its technical applications, B., 686.

Brund, A., testing cement and concrete

by electric heating, B., 1054.

Brundage, J. T., and Gruber, C. M., determination of barbiturates in blood and urine, A., III, 288.

Bruneel, J. See Lespagnol, A. Brunel, A., allantoicaso; occurrence in the animal organism, A., III, 180. Metabolism of purine-nitrogen in fungi. I. Distribution of allantoinase and uricase in basidiomycetes, A., III, 328. Metabolism of purine-nitrogen in fish and batrachians. I. Catabolism in selachians. II. Catabolism of purine-nitrogen in Teleostei, A., III, 344, 383.

and Echevin, R., metabolism of nitrogen; the appearance of allantoinase and urease in the germination of corncockle (Agrostemma githago, L.), A., III, 408.

See also Echevin, R.

Bruner, F. H., determination of exact age of a Canadian uraninite, A., I, 384.
Bruner, H. D., and Wakerlin, G. E.,

blood picture of the normal dog, A., III. 411.

See also Wakerlin, G. E.

Brunetta, B. See Bragagnolo, G. Brunin, M. See Homes, G. A.

Brunius, E., immunochemical system, sheep blood-anti-sheep blood serum, A., III, 5. Purified Forssman preparations, A., III, 55.

Brunklaus, J. H., condensation, B., 988.
Brunner, H., and Farmer, E. H., mechanism of polymerisation. I. Dimeric tetramethylethylene, A., II, 395.
Brunner, K., sterols, bile acids, and re-

lated natural compounds, A., III, 339. See also Bauer, K. \hat{H} ., and Neugebauer, H.

Brunner, O., pigments of the retina, A., III, 296.

and Kleinau, W., retinal substances.
V. Isolation of vitamin-C from the retina, A., III, 406.
Brunner, R. Seo Baur, E., and Schreder,

Bruno, B., relationship between vagotonin, callicrein, and vagotropine, A., III,

and Giuseppe, M., ratio dchydroascorbie: ascorbic acid [in urine], A., III, 462. Brunovski, B. K., structure of catapleiite,

A., I, 206. See also Sedletzki, I. D., and Vernadsky,

Bruns, B., Kozlova, E., and Maksimova, M., action of ozone on active charcoal, A., I, 575.

See also Schurmovskaja, N.

Bruns, H., twenty-five years of chlorination of potable water in Germany, B., 1282. Brunstetter, B. C. See Smart, H. F. Brns, G., utilisation of resinous products as insecticides and as spreaders in agriculture and especially viticulture, B., 1254.

Brusch, G., concrete roads, B., 786.

Brusilevskaja, A. I., rôle of fats and lipins in blood during absorption of some indifferent narcotics, A., III, 217.

and Staritzuina, T. V., determination of some volatile narcotics in tissues, A.,

III, 478.

Brusilovski, A. M., Sigal, F. S., and Vilentschik, M. M., comparison of spectrophotometric and colorimetric methods of testing colour of paints, B., 699.

and Tzarev, B., preparation of light-stable highly disperse lead chromes, B.,

1086.

Bruson, H. A., and Eastes, J. W., action of sulphuric acid on unsaturated thiocarbimides: thiolthiazolines, A., II, 524.

and Resinous Products & Chem. Co., phenol-formaldehyde resin, (P.), B., 263. Resinous amino-derivatives, (P.), B., 371.

and Röhm & Haas Co., complex phenolic soap, (P.), B., 465. Phenolic morpholines, (P.), B., 981. Morpholinometho- [-methyl derivatives of] polyhydric phenols, (P.), B., 981.

Stein, O., and Röhm & Haas Co., water-soluble phenolic derivatives, (P.), B.,

651.

Brussov, J. J. See Balandin, A. A. Brust, R. W. See Wohl, M. G.

Brutzeus, M., intrinsic values of C-C and C-H linkings in hydrocarbons, A., I, 223. Thermochemistry of hydrocarbons, A., I, 309. [Calorific] yields of the combustion of hydrocarbons, and energy values of the atomic linkings, A., I, 364. Heat of formation of hydrocarbons, A., I, 413.

Brutzkus, E. B. See Michaltschuk, B. V. Brnun, J. H., and Faulconer, W. B. M., 100-plato semi-automatic laboratory bubble-cap still of glass, A., I, 380.

and West, S. D., twenty-plate laboratory bubble-cap still for low-boiling materials, A., I, 380.

Bruylants, P., and Jennen, J., maleo- and citracono-nitriles, A., II, 90, 330.

Bruynes, J. See Radio Corp. of America. Bryan, A. H. See Fulton, M. N.

Bryan, A. M., and Smellie, J., wetting of mine dusts, B., 403.

Bryan, C. S., and Nelson, E. A., influence of contaminating bacteria on results of the microscopic test for streptococcie mastitis, A., III, 434. See also Fiske, A. H.

Bryan, J. M., corrosion of tin, B., 1221. Corrosion of aluminium, B., 1221,

See also Morris, T. N.

Bryan, O. C., availability of essential nutritive elements as affected by soil types, B., 1099.

Bryan, R. R., and Kuryla, M. H., milling and cyanidation at Pachuca, B., 49. Bryant, D. M. See Vickers, V. R. S. Bryant, E. E., controlled boiling acid test

for porcelain enamels, B., 1339.

Bryant, F. Le G., refrigeration, (P.), B.,

Bryant, L. R., modified test for salt in butter, B., 834.

Bryant, S. A. See Campbell, W. G.

Bryant, W. M. D., polymorphism of acetaldehyde-2:4-dinitrophenylhydrazone, A., IĬ, 5.

See also Smith, Donald Milton.

Bryce, G., dissociation of hydrogen by tungsten, A., I, 85. Effect of oxygen on power of tungsten to dissociate hydrogen, A., I, 368.

See also Roberts, John K.

Brydowna, W. See Kuhn, R.

Bryson, H. C., preservation of wood against fungi and insects, B., 676. Measurements of drying time [of paints, varnishes, and lacquers], B., 944. Oxychloride cements and their application, B., 1208.

Bub, K. See Fischer, Hans.

Bubblestone Co. Sec Rice, J. A.

Bubinin, B. See Katznelson, M. M. Bubnoff, B., production or reproduction of

pictures in colours, (P.), B., 502. Buc, H. E., and Aldrin, E. E., new highoctane blending agent [for motor fuels],

B., 109. See also Standard Oil Development Co. Buchan, R. C. See Reistle, C. E., jun.

Buchan, S., mastication and rate of set-up [of rubber], B., 372.

Buchanan, C., influence of solvents and of other factors on the rotation of optically active compounds. XXXIV. Influence of water and of deuterium oxide, A., I,

Buchanan, K. S. See Sure, B. Buchanan, W. Y., testing foundry sands,

Buchen, J. C., evaporating salt from the world's largest mineral deposit, B.,

Bucher, J. E., and Antioch Industrial Res. Inst., recovery of beryllium, (P.). B.,

Bucherer, H. T., esters of phenol-aldehyde resins, (P.), B., 64.

Buchholtz, W. F., seed treatment as a control for damping off of lucerne and other legumes, B., 1105.

Buchholz, H., welds in thick aluminium

sheet, B., 796.
Buchholz, K. See Schenck, F.
Buchkremer, J. See Weltzien, W.

Buchkremer, R., use of protective gases in the annealing of steel, B., 1352.

Buchner, G., glycerin recovery in soap industry on basis of the lime-saponification process; history of the Krebitz process, B., 942.

Buchy, M. T., regulators of nitrogenous metabolism. I. Adrenaline, A., III,

Buck, J. H. See Barnes, S. W., and Du Bridge, L. A.

Buck, J. S., N-arylbarbituric acids. III., A., II, 386.

Hjort, A. M., De Beer, E. J., Ferry, C. W.and Ide, W. S., asymmetrical aryl-II. Preparation, alkylearbamides. physical properties, and hypnotic effects, A., II, 404.

Sec also Ferry, C. W., Hjort, A. M., and Ide, W. S.

Buck, K. E., refractory articles, (P.), B., 551.

Buck, $R.\ E.$ See Munch, $J.\ C.$ Buckardt, $H.\ L.$, effectiveness of furfuraldehyde-petroleum combinations in eradicating certain noxious weeds, B.,

Buckingham, E., use of models for studying the circulation in glass tanks, B., 240.

Buckingham, R. A., quantum theory of atomic polarisation. I. Polarisation by a uniform field. II. Van der Waals energy of two atoms, A., I, 446.

Buckingham, S. A., beating [wood] pulp with high-intensity sound, B., 226.

Buckland, I. K., Tomlinson, G. H., jun., and Hibbert, H., occurrence of acetovanillone [4-hydroxy-3-methoxyacetophenone] in waste sulphite liquor from coniferous

woods, B., 523.

Buckler, E. J., spontaneous polymerisation of liquid propaldchyde, A., II,

and Norrish, R. G. W., vapour pressure curve of lead tetraethyl from 0° to 70°, A., I, 22.

Buckley, T. A., dietetic value of palm oil, B., 81.

Bucknall, E. H., boundaries of metal crystals, B., 574.

See also Jenkins, C. H. M.

Bucknam, J. H. See Linde Air Products Co.

Buckner, O. S., and Behr-Manning Corp., abrasive sheet, (P.), B., 39.

Budeanu, T. See Baltaceanu, G.

Budenbender, E. See Strohecker, R. Buderus'sche Eisenwerke, solidification of liquid slags in a highly porous condition, (P.), B., 1360.

Budiloff, N. See Manksch, W.
Budish, J. See Ricci, J. E.
Budnikov, P. P., destruction of grog brick by carbon monoxide, B., 439. Properties of various kaolins heated to a high temperature, B., 548. Grog refractories high in iron for glass-tank furnaces, B., 913.

and Bobrovnik, D. P., reaction between silica, kaolin, or calcined kaolin and

lime, B., 903.

and Gulinova, L. G., influence of temperature of firing and of different admixtures on velocity of slaking of lime, B., 131. Influence of size of particles and of different salts on heat of hardening and mechanical properties of Portland cement, B., 347. Connexion between temperature of ignition of dolomite and amount of heat evolved when water is added to the product, B., 904.

and Kretsch, E. I., reduction of calcium sulphate suspensions, B., 340. Preparation of chlorine- and heat-refractory mortar, B., 555. Action of chlorine on certain calcium silicates, A., I, 420.

and Shicharevitsch, S. A., preparation of heat-refractory materials on the basis of fireclay and quartz, B., 549.

and Shukovskaja, S. S., determination of alumina by means of 8-hydroxyquinoline, A., I, 149.

Budó, A., rotation structure of $^4\Sigma \rightarrow ^4\Pi$ bands, A., I, 271. Intensity formulæ for triplet bands, A., I, 342. See also Schmid, R.

Bueb, H. See Bueb, J.

Bueb, J., and Bueb, H., drying of coffee beans, (P.), B., 391.

Büche, W., power requirements of stirrers [used in chemical processes], B., 1283.

Büchi, J. See Karrer, P. Büchler, F., inherent ash of bright and dull coals, B., 404.

Büchner, A. See Neumann, H. Buechner, W. W. See Lamar, E. S. ,*1441.15 Büding, E. See Lipschitz, W.

Buehler, C. A., Gardner, T. S., and Clemens, M. L., parachor studies at various temperatures, A., I, 552.

and Mackenzie, C. A., action of benzylamine on aliphatic esters, A., II, 143.

Bühler, F., influence of various hormones on urinary elimination of creatine and creatinine, A., III, 322.

Buehrer, T. F., and Williams, J. A., hydrolysis of certain soil minerals, B., 1098.

Bülbring, $E_{\cdot \cdot}$, standardisation of cortical extracts by the use of drakes, A., III, 360. Bnell, A. E. See Schulze, W. A. Buell, M. V., Anderson, I. A., and Strauss,

M. B., carbohydrate metabolism in adrenalectomised animals, A., III, 184.

Buell, W. C., jun., chequer brick in openhearth service, B., 671.

Buell Combustion Co., Ltd., rotary drum dryers, (P.), B., 401. See also Sasse, IV.

Bülow, B. F. von, arsenic content of ocean bed samples of the Atlantic "Meteor' expedition, A., I, 203.

Bülow, M. See Plaut, F. Büngner, W., and Hammerschmidt, W., aluminium joints in electrical practice, B., 576.

Bueren, H. See Koenigs, E. Bürgel, glass wool, B., 37.

Bürgel, E. See Elsner, H. Bürger, K. See Unterzaucher, J.

Buerger, M. J., crystals of the realgar type: the symmetry, unit cell, and space-group of nitrogen sulphide, A., I, 16. Apparatus for conveniently taking equi-inclination Weissenberg photographs, A., I, 49. Kinetic basis of crystal polymorphism, A., I, 120. General rôle of composition in polymorphism, A., I, 120. Symmetry and crystal structure of the minerals of the arscnopyrite group, A., I, 204. Common orientation and a classification for crystals based on a marcasitelike packing, A., I, 287. Symmetry and crystal structure of manganite, Mn(OH)O, A., I, 288. Systematic method of investigating superstructures, applied to arsenopyrite crystal structure type, A., I, 289. X-Ray determination of lattice constants and axial ratios of crystals belonging to the oblique systems, A., I, 399. Crystal structure of cubanite, A., I, 434. Crystal structure of valentinite, A., I,

and Hendricks, S. B., polymorphism of antimony trioxide and the structure of the orthorhombic form, A., I, 447.

Buerger, N. W., unit cell and space-group of sternbergite, AgFe₂S₃, A., I, 585.

Bürgin, E., and Streuli, M., determination of caffeine and aqueous extract in caffeine-free and caffeine-containing coffee, B., 81. See also Streuli, M.

Büsching, W., sulphur trioxide, (P.), B.,

Büssem, W., and Eitel, A., structure of pentacalcium trialuminate, A., I, 288. and Gross, F., metal-like nickel hydrides,

A., I, 474.
Büter, H. See Kaufmann, H. P. Bütschli, L. See Borsche, W.

Büttner, advances in ceramic opacifiers, B., 547.

Büttner, H., and Engl, J., dielectric constant of titanium dioxide at low temperatures, A., I, 600.

Büttner, L. See Prandtl, W.

Büttner-Werke Akt.-Ges., and Schneider, Ernst, pneumatic circulation dryer, (P.), B., 991.

See also Lom, A. von.

Buffalo Electro-Chemical Co., Inc. Sec Bretschger, M. E., and Clark, J. A. Buffalo Foundry & Machine Co. See Van

Marle, D. J. Buffault, P., collection of resin from Pinus nigra and P. sylvestris, B., 943.

Bugai, P. M., casein, a mixture of several

proteins, A., III, 376.

Bugakov, V., and Neskutschaev, V., investigation of diffusion coefficients of metals by means of evaporation, B., 48.

Bugnard, L. See Baisset, A. Buguin, L., peptonisation of beer yeast and the products so obtained, B., 606.

Buij, \hat{J} . See Cohen, E. Building Research Station, gauging lime-plaster undercoats with Portland and gypsum cements, B., 674.

Buividaite, M., alkali ruthenium tetrahalides. II. Reduction of ammonium

ruthenate, A., I, 196. Bujalov, N. I. See Nikolaev, V. I. Bujnitzkaja, V. L. See Gutiria, V. S.

Bukalski, A. See Welter, G. Bukatsch, F., influence of salts on light

emission of marine bacteria, A., III,

Bukin, V. N., determination of vitamin-C, A., IlI, 327.

See also Engelhardt, V. A.

Bnkowski, R., determination of free lime in Portland cement clinker and ground cement, B., 552.

Bnkvin, A. A. See Obukov, A. P.

Bulankin, I., and Tverdun, S., dependence of rate of gelatinisation of gelatin of various ages on concentration and frequency of melting, A., I, 304.

Bulanova, T. F. See Freidlin, L. C. Bulavski, G. L. See Salkind, J. S.

Bulfer, G., Boyle, A. J., and Baldinger, L. H., decomposition of solutions of sodium sulphide, A., I, 191.

Bulin-Sokolov, V., and Kopteva, A., moisture contents in margarine in relation to churning temperature, B., 612.

Bulíř, J. See Votoček, E.

Bull, A. W., effect of degree of comminution on extraction by percolation of belladonna leaf, ipecacuanha, and stramonium, B., 86.

Bull, F. W. See Whittemore, J. W. Bull, H. B., built-up films of protein and of sterol, A., I, 613.

and Neurath, H., denaturation and hydration of proteins. II. Surface denaturation of ovalbumin, A., III,

and Wronski, J. P., streaming of liquids through small capillaries, A., I, 294. See also Gortner, R. A.

Bull, J. E., cause of degrading effect of wheat germ on baking quality of flour, B., 608.

Bull, L. B., and Dickinson, C. G., infection by and resistance to the Preisz-Mocard bacillus. IV. Toxin, pyogenic action, and lipin content of the bacillus, A., III,

Bullard Co., E. D. See Finn, J., jun. Bullis, D. E., colorimetric method for soft resins of hops, B., 966.

See also Wiegand, E. H.Bullock, J. L. See Giraitis, A. P. Bullock, K., analysis of commercial desiccated hog-stomach preparations; relationship to clinical activity, B., 87.

Buluigina, A. M., synthesis of 6-methyl-coumarin, A., II, 428. Synthesis of fumaric acid, B., 1167.

Bumm, H., microscopical detection of separation in copper-silver alloys, B., 569. Precipitation-hardening of beryllium-copper alloys, B., 570. and Dehlinger, U., formation of marten-

site in nickel-iron alloys, B., 562.

Bunau-Varilla, G., liquid spraying installations, (P.), B., 401.
Bnnbury, H. M. See Imperial Chem.

Industries. Bunce, E. H., advance in zinc smelting, B., 449. Occurrence of copper in

preserved peel (citron, orange, and lemon) and in glace cherries, B., 1401. Haslam, H. M., and New Jersey Zinc Co., zinc oxide, (P.), B., 667.

Lentz, C. J., Mahler, G. T., and New Jersey Zinc Co., zinc oxide, (P.), B.,

36.

Bunde, K. See Jander, W. Bundy, F. P., spectrum of doubly excited helium, A., I, 589.

Bundy Inbing Co., affixing a coating [of copper] to ferrous metal strip, etc., (P.), B., 249. Copper coating of [ferrous] articles, (P.), B., 249.

Bungardt, K., changes in tensile proper-

ties and corrosion-resistance of the magnesium-copper-aluminium D.M. 31 by cold-deformation, B., 1223. Bunimovitch, M., and Faitelowitz, A.,

reduction of potatoes and other starchcontaining vegetables to a dry powder, (P.), B., 185.

Bunin, J. B., Smith, W. W., and Smith, H. W., diffusion coefficients of inulin and other substances of interest in renal physiology, A., I, 361.

Bunn, E. S., and Revere Copper & Brass, Inc., [brass] welding rod, etc., (P.), B., 692.

Bunte, K., and Brückner, H., benzolrecovery processes and economics, B., 1155.

and Struck, P., corrosion of gas pipes, B., 515.

and Wittig, H. W. G., effect of [town's] gas constituents on impregnation of gas-meter leathers, B., 1002.

Bunting, E. N. See Geller, R. F. Bunting, R. W. See White, Julius.

Buntzelman, N., and Vitenberg, R., analytical control of production of 4:4'-dinitrostilbene-2:2'-disulphonic acid, B., 1308.

Bunzell, H. H., leavened bread, (P.), B., 617.

Buodo, G., mineral water from Canne in Puglie, A., I, 584.

Buogo, G. Sec Ferrari, R.

Buonomini, G., viantigen of B. typhosus, A., III, 183.

Burada, (Mlle.) A., salts of bivalent silver;

quinolinate of Ag^{II}, A., II, 261. Buran, S. F. See Wilde, S. A.

Burawoy, A., sterol group. XXX. Oxidation of ergosterol, ergosteryl and lumisteryl acetate with chromic an-

hydride, A., II, 190.

Gibson, C. S., Hampson, G. C., and Powell, Herbert M., constitution of diethylmonobromogold and di-npropylmonocyanogold, A., I, 604. See also Batty, J. W.

Burbank, B. B., and Technicolor Motion Pict. Corp., hardened gelatin films, (P.), B., 952.

Burbo, P., and Ischkin, I., equilibrium of liquid and vapour in the system argon-oxygen, A., I, 72. Analysis of gas mixtures by determination of density by gas balance method, A., 1, 202.

See also Ischkin, I.

Burch, E. F., and Cities Service Oil Co., semi-solid plastic lubricant, (P.), B., 1307.

Burch, J. C. See Ellison, E. T. Burch, J. M., dissociation constants and rotations of some a-substituted ethylamines, A., II, 237.

See also Salathiel, R.

Burch, W. J. N. See Plimmer, R. H. A. Bnrcham, W. E., and Goldhaber, M., disintegration of nitrogen by slow neutrons, A., I, 58. and Lewis, W. B., Bothe-Geiger experi-

ment, A., I, 59.

See also Lewis, W. B.

Burehill, J. See Imperial Chem. Industries.

Burckhalter, R. N., Osburn, J. M., and Michiana Products Corp., filter, (P.), B.,

Burckhardt, W., eczema. II. Rôle of alkali in the pathogenesis of industrial eczemas. III. Rôle of alkali damage of the skin in experimental sensitisation to nickel, A., III, 461.

Burden, W. M., Genders, R., and Harrison, R., alloy steels, (P.), B., 456, 1360. Alloy steels [for nitriding], (P.), B., 800.

Waterhouse, H., and Willows, R., lead-alloy articles [bullets], (P.), B., 1360.

Burdick, L. R. See Barkley, J. F.

Bureau, J., hydrated magnesium nitrites, A., I, 30. Preparation and properties of nitrites (NH₄, Li, Na, K, Cu, Ag, Be, Mg, Ca, Sr, Ba, Zn, Cd, Hg, Pb), A., I, 473.

Bureau, V., liberation of potassium by muscle subjected to electrotonus as well as muscle stimulated directly and indirectly, A., III, 475.

Bureš, Ě., and Lisicová, S., sterols: a phytosterol, A., II, 60.

and Plzák, F., constitution of nymphæine, A., II, 355.

and Sedlář, E., raphanosterol and its

derivatives, A., II, 60. and Trpišovská, M., 2:4:6-trichloro-mtoluidine and derivatives, A., II, 57.

Bureš, M. See Heyrovský, J. Burford, T. H. See Allen, E.

Burg, A. B., and Schlesinger, H. I., boron hydrides. VII. Evidence of transitory existence of borine (BH₃): borine carbonyl and borine trimethylamine, A., I, 372.

Burg, B. van der, standardisation of methods of milk analysis, B., 970.

and Scheer, A. F. van der, preparation of clear rennet, B., 971.

Burg, E. von. See Zeerleder, A. von. Burgard, A. See Neber, P. W. Burgard, C. R., and Nu Size Co., water-

proofing size, (P.), B., 1243. Burgdorf, A. L., use of pituitary stains:

numerical ratios in anterior epithelium: reciprocal relations, A., III, 73. Burgdorffer, A., regulations against air attack in dwelling houses, B., 504.

Burge, W. E., Orth, O. S., Neild, H. W., Ash, $J_{\cdot \cdot \cdot}$ and Krouse, $R_{\cdot \cdot \cdot}$ mechanism of pathological calcification, A., III, 460. See also Wickwire, G. C.

Burgeni, A. See Griffin, H. H., and Herzog, R. O.

Burger, A., and Mosettig, E., phenanthrene series. XV. Substitution in 9:10-dihydrophenanthrene: tetracyclic compounds derived from it, A., II, 423.

Burger, E. E. See Hull, A. W. Burger, G. See Bretschneider, H.

β-titanium, A., I, 117.

Burger, H. C., Milaan, J. B. van, and Ornstein, L. S., intensity measurements in the spectrum of helium, A., I, 485.

Burgers, W. G., electron diffraction photograph of a random arrangement of cross-grating crystallites," A., I, 119. and Jacobs, F. M., crystal structure of

and Ploos van Amstel, J.J.A., texture of thinly rolled tungsten foil, A., I, 67. "Oriented" oxidation of barium, A., I, 68. Electron-optical observation of metal surfaces. I. Iron: formation of the crystal pattern on activation. II. Phenomena observed on transition of a- into γ -iron, A., 1, 119. Apparatus for "optical" demonstration of some

geometrical features of electron diffrac-

tion photographs, A., I, 201. See also Bruining, H.

Burgeson, S. E., flexure and torsion testing of copper wire, B., 568.

Burgess, A. H., [report on] hop research, B., 272. Factors affecting rate of hop drying, B., 1257.

Burgess, C.O. See Union Carbide & Carbon Corp.

Burgess, M. A., plastic, (P.), B., 945.

Burgess, W. M., and Holden, F. R., produets obtained by reducing action of metals on salts in liquid ammonia solution. IV. Action of potassium and sodium on silver salts. V. Action of calcium on silver salts, A., I, 256.

Burgess Cellulose Co. See Schorger, A. W. Burgess Laboratories, Inc., C. F., purification of titanium compounds, (P.), B., Forming of titanium products, (P.), B., 239. Gas filters, (P.), B., 402.

See also Kliefoth, M. H.
Burgess Titanium Co. See Svendsen, S. S. Burgevin, H., fertiliser requirement of soils, B., 595.

and Guyon, G., utilisation of fertiliser nitrogen by plants, B., 597. See also Demolon, A.

Burghart, L. M., and U.S. Industrial Alcohol Co., inhibiting corrosion [of radiators of internal-combustion engines], (P.), B., 799.

Burghoff, H. L., and Lawson, D. E., effect of tellurium on mechanical properties of certain copper-base alloys, B., 1353. Lawson, D. E., and Chase Cos., copper-

base alloy, (P.), B., 250.

Burgin, J. Sec Bataafsche Petroleum Maats., and Shell Development Co.

Burgoyne, J. H., combustion of aromatic and alicyclic hydrocarbons. I. Slow combustion of benzene, toluene, ethylbenzene, n-propylbenzene, n-butylbenzene, o-xylene, m-xylene, p-xylene, and

mesitylene, A., I, 522.

Burgsmüller, W., strength of rock-salt crystals. I. Influence of temperature and internal impurities. II. Highvacuum strength and influence of adsorbed impurities, A., I, 70.

Burgstaller, F., detection and determination of special impregnating materials in paper, B., 427. Detection of tannin in dyed or printed papers, B., 771.

Burgwald, L. H., and Mooney, J. L., separation of serum in coffee cream, B., 388.

See also Spicer, D. W.

Burhop, E. H. S., atomic disintegration by particles of low energy, A., I, 58.

Hill, R. D., and Townsend, A. A., selective absorption of neutrons in silver, A., I, 107.

Burk, D., mechanism of nitrogen fixation by living forms, A., III, 224.

and Horner, C. K., rôle of traces of molybdenum in physiology and agrobiology of Azotobacter, B., 1106.

Burk, E. F., synthetic manure-heated beds, B., 596.

Burk, N. F., osmotic pressure, mol. wt., and stability of amandin, excelsin, and certain other proteins, A., III, 416.

Burk, R. E., Baldwin, B. G., and Whitacre, C. H., thermal reactions of ethylene, B., 521.

See also Du Pont de Nemours & Co., E. I., Standard Oil Co., and Standard Oil Co. of Ohio.

Burkard, P. N. See Elder, A. L.

Burkart, W. See Reichel, L.

Burke, E. T., rôle of iodine in therapy of syphilis: relation to lipins, A., III, 172. Burke, O. D. See Blodgett, F. M.

Burke, S. A., application of logarithmic sector to corrosion problems, B., 354. Burke, S. P., and Downs, R., oxidation of

pyritic sulphur in coal mines, B., 309. See also Doherty Res. Co.

Burkey, L. A., Sanders, G. P., and Cone, J. F., sequence of bacterial and chemical changes occurring in mastitis milk, B., 1122.

See also Saunders, G. P.

Burkhard, M. J., and Socony-Vacuum Oil Co., distillation of oils, (P.), B., 521. Distillation of hydrocarbons, (P.), B.,

Burkhardt, A., zinc alloys as substitutes [for other alloys], B., 144. Burkhardt, G. N., Horrex, C., and Jenkins,

D. I., hydrolysis of arylsulphuric acids. III. IV. Conjugation between the benzene nucleus and unsaturated side-chains; sterie effects and influence of alkyl groups, A., I, 36.

Burkhart, B. A. See Dickson, J. G. Burkholder, P. R., and Johnston, E. S., inactivation of plant growth-substance by light, A., III, 242.

See also Avery, G. S., jun.
Burkholder, W. H., bacterial leaf spot of geranium, A., III, 316.

Burkitt, J. L. See Bennett, H. T.
Burkser, E. S., Kapustin, N. P., and
Kondoguri, V. V., helium, radium, and thorium in beryllium minerals of the U.S.S.R., A., I, 432. and Michlin, S. G., influence of nature

and concentration of the electrolyte on the height of the FcH-ion wave in polarographic analysis, A., I, 580.

and Schapiro, M. J., boron content of mineral waters and mud of the U.S.S.R. I., A., I, 154.

Burlage, H. M. See Roth, H. D. Burlakov, V., softening of water for artificial silk factories, B., 1035.

Burlot, E. See Muraour, H.

Burman, A. S., production of aluminium oxide, (P.), B., 1202.

Burmistrov, F. L., additivity and subtractability of action of light of different spectral regions, A., I, 39.

Burn, J. H., biological assay, A., III, 82. Burn, R. D., production and properties of copper, B., 567.

Burnet, F. M., and Freeman, M., inactivation of a bacteriophage by immune serum and by bacterial polysaccharide, A., III, 227.

Burnett, A. C. See Crosby, W. E. Burnett, D., determination of intermolecular forces in gases from their viscos-

ities, A., I, 445. Burnett, R. Le G. See Bell, R. P.

Burnham, J. See Cross, P. C., and Leighton, P. A.

Burnham, W. R., and Madgin, W. M., equilibrium constants in terms of activities (cryoscopic). VI. Pyridine chlorophenoxide in benzene and in p-dichlorobenzenc, A., I, 306.

Burns, B., aircraft spot-welding, B., 575.
Burns, G. R., photosynthesis and absorption of radiation by plants, A., III,

Burns, J. A., yeast flocculation, B., 278. Yeast weakness, B., 1394.

Burns, J. E., and Remington Arms Co., priming mixture, (P.), B., 503.

Burns, J. H. See Schmidt, E. G. Burns, J. L., and Brown, V., diagnosis of metal troubles in industry. I. Forging. III. Carburising, B., 1217, 1352.

See also Archer, R. S. Burns, J. N. See Ford Motor Co.

Burns, R. E., and Refining, Inc., saponified

material, (P.), B., 587.

Burns, R. H., and Johnston, A., determination of the yield of raw wool from its density under pressure, B., 225.

Burns & Sons, Inc., J. See Keenan,

J. H.

Buron, H. A., MacDonough, J. V., and Little, Inc., A. D., preparation of zein, (P.), B., 1266.

Buron, P. See Depardon, L. Burova, E. I., kinetics of separation of vanadie acid from sodium vanadate solutions, A., I, 367. Burovaja, E. E. See Bokij, G. B. Burr, G. O. See Miller, E. S.

Burr, (Mrs.) M. S., and Dawson, H. M., complex group of reactions involved in final stages of the idealised hydrolysis of aqueous solutions of sodium bromoacetate, A., I, 249.

Burr, W. W. See Kiesselbach, T. A. Burrage, L. J., and Allmand, A. J., diffusion of one-tenth molar hydrochloric acid through aqueous solutions of potassium, sodium, and lithium chlorides, A., I, 508.

See also Imperial Chem. Industries, Burrell, P. C. See Emsweller, S. L. Burriel, F. See Del Campo, A. Burris, R. See Franke, K. W.

Burrough, E. J. See Strong, R. A.

Burroughs, S. G., and Pennsylvania Coal Products Co., conducting alkali fusions, (P.), B., 528. Hydrolysis of chlorophenols, (P.), B., 528. Hydrolysis of chloroalkylphenols, (P.), B., 528.

Burroughs, W. See Mitchell, H. H. Burrows, G. J., and Lench, A., derivatives of zine halides with tertiary arsines, A., II, 220. Co-ordination compounds of cadmium with tertiary arsines, A., II, 220. See also Anderson, J.J.

Burrows, H., Cook, J. W., Roe, E. M. F., and Warren, F. L., isolation of Δ^{3.5}-androstadien-17-one from urine of a man with a malignant tumour of the adrenal cortex, A., III, 321. Burrows, W. See Jordan, E. O.

Burschkies, K., aromatic aurothiol-arsenic compounds, A., II, 528. and Rothermundt, M., aromatic com-

pounds containing sulphur and arsenic, A., II, 128.
Burstall, F. H., co-ordination theory in

pigments, B., 699.

See also Morgan, (Sir) G. T. Burstein, M. See Binet, L.

Burstein, R., adsorption of alkali on charcoal, A., I, 562.

Burstein, R. C., determination of heavy hydrogen in H₂-D₂ mixtures by heat conductivity, A., I, 630.
Burstrom, H. See Boratyński, K.

Bursuk, A. J. See Zanko, A. M.

Burtle, J. [with Buswell, A. M.], oxygen demand [of sewages], B., 847.

Burton, A. C., basis of principle of master reaction in biology, A., III, 479. See also Murlin, J. R.

Burton, D., sampling of [vegetable-tanned] sole leather. I., B., 69. Determination of acidity of vegetable-tanned leather. III., B., 818. Report of the International $p_{\rm H}$ Commission [of the Society of Leather Trades' Chemists], B., 1094.

and Harrison, J. M., deterioration of vegetable-tanned leathers. I. Effect of tanning material on durability of leather as judged by the Innes per-oxide and Atkin-Thompson buffercapacity methods. II. Mechanism of protection, B., 818.

and Robertshaw, G. F., two new developments in analysis of sulphonated oils, B., 58. Use of "oily matter" isolated in determining the Burton-Robertshaw index of sulphated oils for determination of the iodine value, B., 1079.

See also Robertshaw, G. F.

Burton, E. F., and Mann, K. C., effect of magnetic fields on persistent currents in superconducting single crystals of tin, A., I, 229.

and Turnbull, L. G., dielectric constants of solids at high frequencies and influence of water of crystallisation on dielectric constant, A., I, 284.

Burton, G. W., stimulation of rootformation on lucerne cuttings, A., III,

Burton, H., and Shoppee, C. W., αβ-diphenylpropaldehyde, A., II, 246.

and Stoves, J. L., alkaline hydrolysis of the azlactones derived from certain o-nitrobenzaldehydes; formation of isatins, A., II, 216. Synthesis of 5and 6-benzyloxyindoles and attempts to prepare 5- and 6-hydroxyindoles therefrom, A., II, 517.

Burton, J. L., use of wetting agents in printing inks, B., 589.

Burton, M., sloping manometer, A., I, 481. and Davis, T. W., auto-bubbler pipette,

A., I, 267.

Davis, T. W., and Taylor, H. A., photolysis of azomethane. I. and II., A., I, 419.

Burton, S. M., chemical process and

[metallic] product [from titanium], (P.),

uruiană, L., determination of ββ. dichlorodiethyl sulphide, A., II, 271. Action of sunlight on milk, A., III, 376. Buruiană,

Burwasser, F. See Gontscharov, S. Burwell, A. W., and Alox Corp., lubricant composition, (P.), B., 874.

Kempe, A., and Alox Corp., emulsion oil composition, (P.), B., 874.

Burwell, R. L., jun., heterogeneous catalytic racemisation of l-isobutyl alcohol, A.,

Hummel, F., and Wallis, E. S., preparation and optical rotation of a-phenyla-deuteromethylethane, A., II, 182.

and Taylor, H. S., adsorption and decomposition of carbon monoxide on zinc oxide catalysts, A., I, 315. Busch, F. See D'Ans, J.

Busch, G., solids, A., I, 504.
Busch, M., and Keyser, F., some new derivatives of barbituric acid, A., II,

and Weber, W., electrolytic hydrogenation of bromobenzene, A., II, 236. Busch, S. See Bonner, Thomas W.

Buschinski, G., determining gypsum and anhydrite, B., 1335.

Buse, II., quantitative methods available for evaluation of consumption sugars; possibility of a simple type system, B., **175.**

Buse, R. See Deplanque, R., and Lampe,

Bnser, K., colloid chemistry of "wet-on-wet" paint processes, B., 260.
Bush, E. R., and Chadeloid Chem. Co.,

coated article and composition therefor

[wood stain], (P.), B., 1376. Bushell, L. A., sampling of coal, B., 513. Bushill, J. H. See Lampitt, L. H.

Bushnell, J., non-legumes as green manures for potatoes, B., 598.

Businco, A., and Nicolosi, G., colloidal substance of thyroid gland indicated by Mallory's stain, A., III, 168.

Busnel, R. G., and Drilhon, A., biochemistry of Leptinotarsa decemlineata, Say, during hibernation, A., III, 211. See also Drilhon, A., and Fontaine, M.

Busquet, H., [production of] rhythmic automatism in muscle of the leech by quinine phenylethylbarbiturate and its suppression by potassium chloride, A., ĬĬĨ, 309.

Busse, A. See Brockmann, H. Busvine, J. R. See Parkin, E. A. Buswell, A. M., and Boruff, C. S., di-

gestion of industrial wastes, (P.), B., 194.

Deitz, V., and Rodebush, W. H., effect of hydrogen bond formation on fundamental frequencies of OH radical, A., I, 110. Effect of hydrogen bonding on the infra-red absorption of the hydroxyl group, A., I, 443. Rodebush, W. H., and Roy, M. F.,

infra-red absorption as a measure of

enolisation, A., II, 457. See also Bornff, C. S., Burtle, J., and Upton, W. V.

Buszczynski, B., heredity: sugar content and weight of the sugar beet, B., 170. Busztin, A. See Waelsch, H.

Butacon Akt.-Ges. See Bermann, V.

Butaeva, F. See Fabrikant, V. Butcher, C. H., industrial microscopy. VIII. Rubber fillers, B., 1090.

Butcher, W. T. See Goodlass Wall & Lead Industries.

Butchers, E. Sec Hume-Rothery, W.

Butement, C., chromatone: making threecolour paper prints, B., 395.

Butement, F. D. S., and Terrey, H_{\bullet} , absorption spectrum of bivalent samar-

ium, A., I, 493.

Butenandt, A., biochemistry of the sterol group. I. Sterols, bile acids, and neutral saponins. II. Cardiac poisons and vitamin-D. III. Sex hormone group, A., III, 7.

and Dannenbaum, H., urinary excretion

of cholesterol, A., III, 378. and Fleischer, G., 17-iso-45-pregnen-3-ol-20-one, A., II, 104.

and Goergens, C_{\cdot} , α_{\cdot} and β_{\cdot} estradiol, A., II, 417.

and Grosse, W., simple preparation of the chloroketono C₁₀H₂₇OCl (dehydro-androsteryl chloride) isolated from male urine, A., II, 65. Replacement of the 3-hydroxyl in pregnenolone and androstendiol by chlorine, A., II, 344.

and Hanisch, G., A5-androsten-17-ol-3one, an isomeride of testosterone, A.,

II. 64.

and Hausmann, E., oxidation of cholesterol with sclenious acid, A., II, 289. Schramm, G., and Kudszus, H., bromination of 4-choleston-3-one, cholestanc-3:6-dione, and Δ^4 -cholestene-3:6-dione, A., II, 458.

Schramm, G., Wolff, A., and Kudszus, H., brominated sterol ketones, A., II, 63. Tscherning, K., and Dannenberg, H., epiætiocholane-3:17-diol from male

urine, A., II, 424.

Buteuko, G. A. See Zanko, A. M. Butkevitsch, V. S. See Sobolevskaja, O. J. Butkevitsch, V. V., chlorine as a factor in

crop yields, B., 597.

Butkov, K., and Tschassovenni, spectroscopic study of thermal dissociation of NaNO2, HgNO3, and Ba(NO3)2, A., I, 194.

See also Boizova, Z. V.

Butler, A. M. See MacKay, E. M.

Butler, C. L., Cretcher, L. H., and Mellon Inst. of Industrial Res., hydroxyethylapoquinine, (P.), B., 394.

Renfrew, A. G., Cretcher, L. H., and Souther, B. L., einchona alkaloids in pneumonia. IV. Derivatives of ethylapocupreine [ethylapoquinine], A., II, 171.

See also Cretcher, L. H., and Souther, B. L.

Butler, D. B., [building] lime, B., 235.

Butler, G. C., and Marrian, G. F., pregnane-3:17:20-triol from urine of women showing the adreno-genital syndrome, A., III, 361.

Butler, J. A. V., energy and entropy of hydration of organic compounds, A., I, 138. Hydrogen overvoltage and reversible hydrogen electrode, A., I, 140.

and Harrower, P., activities of aliphatic alcohols and halides in non-polar solvents, A., I, 136.

See also Orr, W. J. C.

Butler, J. W., jun., origin of emery deposits near Peekskill, New York, A., I, 51. Butomo, D. G., special nickel-silvers, B.,

Butschkovski, M. V. See Zosimovitsch,

Butt, C. See Shapiro, H. Buttensehön, W. See Mumm, O.

Butter, G. See Voss, W.

Butterbaugh, D. J. See Miller, Richard

Butterbaugh, H. W., and Amer. Brass Co.,

welding-rod alloy, (P.), B., 458.

Butterfield, C. T., Ruchhoft, C. C., and
McNamee, P. D., sewage purification. VI. Biochemical oxidation by sludges developed by pure cultures of bacteria from activated sludge, B., 625.

Butterfield, J. A., outgrowths on zircon, A., I, 102.

Butterfield, W. See Kodak, Ltd.

Butterfield, Ltd. W. P. Sce Garbutt, R. Butterworth, B., effects of soluble salts in

clay products, B., 781.

Butterworth, C. E. See Koppers Co. of Delaware.

Buttfield, W. J., and Vulcan Detinning Co.,

stannic chloride, (P.), B., 1202. Buttgenbach, H. See Mines Réunies, Soc.

Buttle, G. A. H., Parish, H. J., McLeod, M. and Stephenson, D., chemotherapy of typhoid and some other non-streptococcal infections in mice, A., III, 207.

Stephenson, D., Smith, S., Dewing, T., and Foster, G. E., treatment of streptococcal infections in mice with 4:4'-diaminodiphenylsulphone, A., III, 302. See also Colebrook, L, and Gray, W. H.

Buttner, E. E., endemic goitre in Langkloof valley, A., III, 124.

Button, L. See Hawley, E. E. Butts, D. C. See Hercules Powder Co. Butts, J. S., Blunden, H., and Dunn, Max S.

amino-acid metabolism. II. Fate of d- and dl-glutamic, dl-pyroglutamic, and l- and dl-aspartic acids in the normal animal. III. Fate of dlleucine, -norleucine, and -isoleucine in the normal animal, A., III, 304, 382.

Blunden, H., Goodwin, W., and Deuel, H.J., jun., kctosis. X. Glycogen synthesis after ethyl esters of various fatty acids, A., III, 92.

See also Deuel, H. J., jun., and Samuels, L. T.

Butturini, L., and Marangoni, P., action of extracts of shepherd's purse [on animals], A., III, 65. Butuzov, V. P. See Flint, E. E.

Butz, K., and Amer. Hyalsol Corp., pyrophosphoric acid esters of higher aliphatic alcohols, (P.), B., 1020.

Butz, L. W., and La Lande, W. A., anthelmintics. II. Comparison of certain ozonides, chenopodium oil, and diheptanol peroxide, A., III, 178.

Buxbaum, E., and Greenwald, C. K., alumdiphtheria toxoid precipitate, A., III, 250. Buys, A., light, porous, moulded articles from cellulosic material and cement, (P.),

B., 41.

Buzágh, A. von, colloid science and radio technique, A., I., 29. Relation between sedimentation volume of particles of microscopic size and activity coefficients of electrolytes, A., I, 359. Industrial significance of colloid-chemical research in Hungary, B., 735.

and Han, F., kinetics of peptisation.
II. Rate of peptisation of lyophobic

ferric oxide, A., 239.

Buzzard, R. W., anodising of aluminium alloys in chromic acid solutions of

different concentrations, B., 578 and Wilson, J. H., anodic coating of magnesium alloys, B., 453. Deterioration of chromic acid baths used for anodic oxidation of aluminium alloys, B., 453.

Byck, L. C., and Bakelite Corp., [phenol-aldehyde] moulding mixtures, (P.), B., 1374.

Byczkowski, A. Sco Terlikowski, F.

Bye, C. E., ore concentrator, (P.), B., 303.
Byerly, T. C. See Barott, H. G., and
Titus, H. W.

Byers, E. L., and Price, W. V., salting of brick cheese, B., 972,

Byers, H., antioxidation agents for lubricating oils, B., 641.

Byers, H. G., selenium occurrence in certain soils in the United States, with a discussion of related topics, B., 376. Selenium in [soils of] Mexico, B., 1383.

See also Anderson, M. S., Brown, I. C., Feustel, I. C., Miller, J. T., Scott, W., and Slater, C. S.

Byers, J. H., gum inhibitors [for motor fuel], B., 869.

Byers, J. M., composition for absorbing vibration and sound, (P.); B., 916.

Byers, W. B., treatment of vermiculites, (P.), B., 239.

Byk, G. O. See Alexandrov, G. P.

Byler, W. H., measurement of brightness of

luminous paint, B., 369.

Byrne, C. O. See Forbes, A. I., jun. Byrne, J., Saywell, L. G., and Cruess, W. V., iron content of grapes and wine, B.,

Byrnes, C. P. See James, J. H. Byron, T. H., and North Amer. Rayon

Corp., hydrocaoutchoue yarn, (P.), B., 27. Bywater, W. M. See Barrett Co.

Caamano, J. L. G. See Crespl, M. Cabannes, J., and Dufay, J., spectrum of nuclei of comets, A., I, 2.

Caberti, L., printing with indigosol colours, B., 336.

Cabral, A. da C., essential oils of eucalyptus, B., 729.

Cabrera, B., moments of some rare earth cations and Weiss magnetism, A., I, 504. Caccialanza, P., blood-glutathione during various experimental conditions. III. Thyroparathyroidectomy and treatment

with parathyroid hormone, A., III, 403. Cacciavillani, B., preparation and conservation of sodium tetrathionate, A., I, 258. Toxicity of sodium tetrathionate, A., III, 176. Disinfectants of the urinary passage. I. Influence of hydrogen ions on the degradation of various drugs, especially arbutin. II. Additive complexes of urotropine and dihydric phenols, A., III, 490.

Cachera, R. See Carnot, P. Cachin, M. See Chabrol, E. Cadden, J. F., and Faris, A. M., non-

protein-, urea-, and residual nitrogen of the blood during normal pregnancy and the puerperium, A., III, 301.

Caddick, A. J. See South Bank Chemical Co.

Cadena, F., metal consumption in hammer mills at Norris Dam, B., 987.

Cadenbach, G. See Degkwitz, R. Cadigan, J. M. See Farr, C. C.

Cadisch, J., geological characteristics of mineral springs of Meltingen, A., I, 51. Cado, Y. See Levy-Bruhl, M.

Cadrobbi, B. See Nembrot, A.
Cady, H. P. See Gocdwin, F.
Cady, W. H. See Edelstein, S. M.

Caglioti, V., relations between AlPO4 and SiO₂ and between aluminophosphoric acids and silicic acids, A., I, 225. Structure of bones, A., III, 198. Composition, workability, and structure of marble, B., 348.

and Gigante, D., biochemistry of bones during development, A., III, 118.

and Sartori, G., polarographic study of titano-tartaric complexes, A., I,

See also Parravano, N.

Cagnaux, Y. See Hazard, R.

Cahalin, V., tomato canning [in California], B., 974.

Cahane, M., effect of infundibular puncture on blood-sugar and hepatic glycogen in rats, A., III, 305. Chlorine and sodium chloride content of muscle and brain tissue after adrenalectomy, A., III, 320.

See also Parhon, C. I.

Cahen, R., and Ardoint, P., determination of gonadotropic activity of pituitary anterior lobe extracts, A., III, 39.

and Launoy, L., biological standardis-ation of squill, B., 1406.

Cahen, S. F. See Clifton, C. E.
Cahill, G. F. See Brand, E.
Cahn, C. See Gören, G.
Cahn, F. J., citric acid manufacture [by fermentation], (P.), B., 1396. Cahn, R. S., and Boam, J. J., colour test

for rotenone, B., 286. and Phipers, R. F., reactions caused by

"activated" alumina, A., I, 368.

See also Boam, J.J. Cahnmann, M., hydrogenation of $\alpha\beta$ dihydroxypropiophenone; formation of two diasterioisomeric phenylglycerols, A., II, 376.

Cahuzac, M. See Sendrail, M.

Caille, R. Sec Arloing, F.

Cailleau, R., growth-promoting activity of sterols for Trichomonas columbæ, A., III, 224. Nutrition of flagellates-Tetramitidæ; sterols as growth factors for Trichomonas. I. and II., A., III, 396,

Caillère, (Mlle.) S., change of anorthite into a variety of thomsonite containing calcium, A., I, 334. Serpentine minerals, A., I, 432.

Cain, R. A. See Miller, C. E., and Johnson, Carl H.

Cairns, H., Greeves, T. N., and Muskett, A. E., control of common scab [Actinomyces scabies (Thaxt.), Güss.] of the potato by tuber disinfection, B., 712. See also Saunderson, W. R.

Caizzone, G., and Luppino, G., in-vitro action of insulin on sugar content of blood in presence of various tissues, A., III, 102.

Calabro, Q., chemical activity of nerves, A., III, 258, 415.

Calas, R., preparation of camphorone and of two stereoisomeric dihydrocamphorols, A., II, 295.

Calcagni, G., synthesis of nitrogenous substances in the living organism, A., III,

Calcagno, O., treatment of leprosy with oils obtained from salt- and fresh-water fishes, A., III, 14.

Calco Chemical Co., Inc. See Battegay, M., Beardsley, A. P., Crossley, M. L., Johnson, E. S., and Klipstein, K. H.
Calcott, W. S. See Du Pont de Nemours

& Co., E. I.

Calderwood, A. H. See Shell Development Co.

Caldwell, J., air-borne plant virus, A., III, 276. Sterilising apparatus, (P.), B., 3. and Meiklejohn, J., oxygen uptake of isolated plant tissue. I. Effect of phosphate and of added carbohydrate. II. Effect of inhibitors, A., III, 443.

Caldwell, J. R., and Moyer, H. V., use of crotonaldehyde to reduce post-precipitation of zinc on copper sulphide, A., I, 149.

Caldwell, L., hydrated magnesium silicate decolorising materials, (P.), B., 135. Caldwell, M. J. See King, H. A.

Caldwell, P. See Elmslie, W. P.

Caldwell & Son, Ltd., J. J. See Lansley,

Caley, E. R., and Ferrer, J. M., jun., detection and determination of minute amounts of fluorine, A., I, 530.

Calfee, J. D., and Bigelow, L. A., action of elementary fluorine on organic com-pounds. IV. Vapour-phase fluorination of ethane, A., II, 479. See also Miller, W. T., jun. Caltee, R. K., and MeHargue, J. S.

optical spectroscopic determination of boron; polarising attachments, A., I, 425.

Calhoun, G. M., and Crist, R. H., reactions in the system containing nitrogen dioxide, carbon monoxide, and oxygen; NO_a as an intermediate in the classical termolecular oxidation of nitric oxide, A., I, 416.

See also Crist, R. H.

Calhoun, J. M., cuprene formation, A., I, 418.

and Maass, O., effect of pretreating wood in aq. salt solutions on subsequent delignification in sulphite liquor, B.,

See also Corey, A.J.

Calico Printers' Association, Ltd., Lantz, L. A., and Hassid, N. J., laminated fabrics, (P.), B., 30. Treatment of regenerated cellulose material, (P.), B., 1197.

Lantz, L. A., Whinfield, J. R., and Miller, W. Stuart, finishing of textile materials, (P.), B., 337.

and Whinfield, J. R., [delustring] treatment of artificial and natural silks, (P.), B., 233. Treatment of textile fabrics, (P.), B., 434.

California Consumers Corporation. See Meinzer, G. H.

California Fruit Growers Exchange. Baier, W. E., and Nelson, A. E.

California Spray-Chemical Corporation. See Volck, W. H.

Calingaert, G., Horton, S. D., and Stair, R., sapphire and other new combustionchamber window materials, B., 136.

Calinicenco, N., depolarisation of light which traverses suspensions and colloids in relation to the radius of the particles, A., I, 237.

Callahan, E. T. See Tittsler, R. P. Callaway, J., jun., decomposition in eggs,

B., 973. Callegari, L., mercury and its salts in protein media, A., III, 375. Determination of urinary sulphur, A., III, 378. Influence of total extracts of kidney on the toxicity of copper, A., III, 479.

Callenbach, J. A. See Cook, H. T.Callender, A., and Stevenson, A. B., application of automatic control to a typical problem in chemical industry, B., 400.

See also Imperial Chem. Industries. Callender's Cable & Construction Co., Ltd., and Vincent, R. S., measurement of low pressures, (P.), B., 308.

Callinan, E. E., and Soler, G., practical service testing of refractories for alloy steel melting, B., 1206.

Callis, C. See Aluminum Co. of America. Callisen, F. I., absorption measurements on medium velocity cathode rays and soft X-rays in oxygen, A., I, 540.

Callo, A. See Gerngross, O.

Callow, E. H., electrical resistance of muscular tissue and its relation to curing, B., 1262.

Callow, H.J., and Hill, D.W., condensation of deoxybenzoin with aromatic aldehydes and ketones. II. Condensations using substituted deoxybenzoins and substituted acetophenones, A., II, 343.

Callow, R. K., and Parkes, A. S., endocrines in theory and practice; chemistry and assay of male hormones,

A., III, 229.

and Young, F. G., relations between optical rotatory power and constitution in the steroids, A., II, 147.

Calloway, N. O., reactions in presence of metallic halides. II. Behaviour of fluorides and reactivity of the halogens, A., II, 405. Friedel-Crafts synthesis, Λ., ΙΙ, 489.

and Green, L. D., reactions in presence of metallic halides. I. β -Unsaturated ketone formation as a side-reaction in Friedel-Crafts acylations, A., II,

Calm, M., separation of liquids or solids

from liquids, (P.), B., 1288.
Calma, V. C., and Andam, A. V., comparative effects on yields of sugar cane of fertilising with ammonium sulphate and with green manure, B., 169.

Caló, A., intermediate glycolysis of tumour cells, A., III, 460.
Calvert, C. K., streptococci test for pollution

of water, B., 848.

Calvert, G. See Hunt & Moscrop, Ltd.
Calvert, J., drought-resistance in wheat:
"bound" and "free" water of expressed sap from wheat leaves in relation to time and soil moisture, A., III, 47. Diurnal variation in "bound" and "free" water and other factors in sap expressed from leaves of Phalaris

tuberosa, A., III, 47.
Calvert, W. C. See Wingfoot Corp.
Calvery, H. O. See Miller, L., and Morris,

Calvet, F., nitration of I:8-dihydroxy-

naphthalene, A., II, 98. and Mejuto, M. N., condensation of chloral with salicylio acid, A., II,

See also Adler, Erich.

Calvin, M., absolute interface potential at an electrode, A., I, 84.

Cambi, L., and Coriselli, C., dithio-salts of copper, A., I, 222.

and Malatesta, L., magnetism and polymorphism of internally complex salts; iron salts of dithiocarbamic acids, A., I, 606.

and Monselise, G. G., thiosilicates. I. Cuprous thiosilicates, A., I, 92.

Cambron, A., and Bailey, C. H., vapourphase cracking of hydrocarbons, (P.), B., 411.

Sec also Du Pont de Nemours & Co., E. I. Cambron, A. C., chemical utilisation of natural gas, B., 1156.

Cameron, A. B., [sewage-]sludge filtration at Springfield, Ohio, B., 191.

Cameron, A. E., sensitive glass electrode of durable form, A., I, 582.

Cameron, C. See Williams, C. H. B. Cameron, C. H., and Patterson, A. L., X-ray determination of particle size, A., Ĩ, 374.

Cameron, D. H., McLaughlin, G. D., and Adams, R. S., mechanism of the reaction between hide substance and basic chromium sulphate, B., 704.

Cameron, D. R. See Hale, G. C. Cameron, E. H., and Celastic Corp., stiffening material [for fabrics, leather, etc.], (P.), B., 32.

Cameron, F. K. Sce Macormac, A. R. Cameron, H. C., effects of vitamin-A on incidence and severity of colds among students, A., III, 43.

Cameron, O. J. See Wile, U. J.
Cameron, S. H., Appleman, D., and Bialoglowski, J., seasonal changes in the nitrogen content of citrus fruits, B., 600. Cameron, W. H. B. See Elliott, A.

Camichel, H., spectrum of Nova Lacertae, A., I, 55.

Cammen, L., determining lubricating quali-ties of liquids, (P.), B., 645. Testing lubricants, (P.), B., 875.

Camp, A. F., non-bumping heater for distillations and evaporations, (P.), B., 307. Camp, C. B., [laxative breakfast] food product, (P.), B., 1404.
Camp, G. D., heavy particle interactions

from β -decay theory, A., I, 440. Camp, H. W., and Henry, R., inspecting and

testing [oil-refinery] pressure-still equipment, B., 1004. Camp, W. J. R., duodenal activity, A., III,

Campbell, (Mrs.) A. J. R. See Campbell, A. N.

Campbell, A. N., and Campbell, (Mrs.) A. J. R., velocity of crystallisation from supersaturated solutions, A., I,

and Smith, N. O., surface tension of intensively dried a-sulphur trioxide, A., I. 287.

Campbell, A. W., and Goodrich Co., B. F., aliphatic amines, (P.), B., 215.

Campbell, D. See Dean, J.

Campbell, D. A., impact-resistance of nickel steels at low atmospheric temperatures, B., 46.

Campbell, D. H., precipitin tests with glycogen from various species of animals, A., III, 412. See also Lennette, E. H.

Campbell, D. R., biochemistry of the lens, A., III, 55.

Campbell, E. H., jun. See Fazikas, J. F. Campbell, F. G. See Fortier, F. R. Campbell, F. H., stability of potassium

thiocyanate solutions, A., I, 97.

Campbell, H., undesirable colour change in frozen peas stored at insufficiently low temperatures, B., 835.

Campbell, H. A., and Link, K. P., derivatives of d-galacturonic acid. III. Synthesis of a mercaptal of d-galacturonic acid and methyl tetra-acetylaldehydod-galacturonate, A., II, 442.

Campbell, H. L. See Benedict, F. G.

Campbell, I., types of pegmatites in the Archean at Grand Canyon, Arizona, A.,

Campbell, James. See Best, C. II.

Campbell, John, Quinn, R. G., and Internat. Paper Co., [non-fibrous] cellulose product [bulking agent for food-stuffs], (P.), B., 28. See also Jones, G. W.

Campbell, (Sir) John, Hanson, D., and Pell-Walpole, W. T., tin alloys, (P.), B., 357, 933.

and Kerr, R., cleansing of tin and articles formed of or coated with tin, (P.), B., 251.

Campbell, J. A., oxygen poisoning and tumour growth, A., III, 418.

Campbell, J. M., Lovell, W. G., and Boyd,

T. A., relative knocking characteristics of motor fuels in service, B., 752.

See also Cramer, P. L.

Campbell, K. N., \(\textit{\rho}\) \(\epsilon\) \(\epsilon\) diene and its hydrogen bromide additive product, A., II, 479. Phenyl benzyl ketimine and derivatives, A., Π , 502.

Morris, R. C., and Adams, R., structure of gossypol. I., A., II, 463.

Campbell, L., downy mildew of peas caused by Peronospora pisi (Deb.) Syd., B., 74. Campbell, L. R., manufacture of products by subjecting a material to relatively

high temperatures, (P.), B., 2. Campbell, N. See Brown, (Miss) E. L.,

and McLeish, (Miss) N.

Campbell, N. R., time lag in the vacuum photo-cell, A., I, 266.

and Rivlin, R. S., effect of hydrogen on time-lag of argon-filled photo-electric cells, A., I, 152.

Campbell, R. W. See Rodebush, W. H. Campbell, S. E., selective refining of light distillate and recovery of by-products, B., 870. Refining of oil, (P.), B., 1011.

Campbell, W. B., and Lodge, W. C., drainage characteristics [of paper-pulp suspensions]: laboratory studies, B., 426. Johnston screen classifier: action on various pulps, B., 426.

See also Russell, J. K., Shipley, J. H., and Walker, F.

Campbell, W. G., and Bryant, S. A., sampling of wood for analysis, with particular reference to Australian eucalypts, B., 786.

Bryant, S. A., and Swan, G., chlorinesodium sulphite colour reaction of

woody tissues, B., 1057.
and Smith, L. H., determination of pentosans in analysis of woods. I. Gravimetric determination of furfuraldehyde, B., 878.

Campbell, W. R., and Hanna, M. I., determination of nitrogen by modified Kjeldahl methods, A., II, 358. Albumin, globulins, and fibrinogen of serum and plasma, A., III, 290. Sulphites as protein precipitants, A., III, 296.

Campellone, P., formation of fibrinogen in blood-plasma and with reference to antibody production in plasma by the reticulo-endothelial system, A., III, 371. Campion, A., east iron and its applications

in engineering, B., 789.

Campion, J. E., Henry, K. M., Kon, S. K., and Mackintosh, J., source of vitamin-D in summer milk, A., III, 104. Camps-Campins, F. See Valdez, R.

Camus, A. See Chollet, A. Canadian International Paper Co., refining of wood pulp, (P.), B., 536.

Canal, F., improvement in filter tubes with glass frit, A., I, 429.

Canal, H. See Goris, A.

Canals, E., and Peyrot, P., fluorescence of pure substances, A., I, 11. Cancino, J. M., artificial fogs, B., 295.

Canda, A. F., selection of cycle and furnace for annealing malleable iron, B., 1212.

Candea, C., Macovski, E., and Kuhn, J. bromo-derivatives of N-allylquinolinium salts, A., II, 115.

and Manughevici, C., formation of ethylene by thermal decomposition of Rumanian petrol from Mareni, B., 407.

and Murgulescu, I. G., action of methane gas from Sarmâşel (Rumania) on lithium and potassium chlorides, 132. Action of methane on strontium and barium chlorides, B., 1044.

Candy, F. P., [dosing apparatus for] purification of water, (P.), B., 506.

Canepa, D. R., and De la Serna, C. S., fermentation of glucose by bacteria of the coli-aerogenes group, A., III, 397.

Canfield, J. J., copperheads or iron oxide defects in porcelain enamel, B., 138.

McGohan, G. W., and Amer. Rolling Mill Co., metal [iron or steel] articles for coating [with enamel], (P.), B., 357.

Canfield, R. H., and Kaiser, H. F., lead

alloy, (P.), B., 932.

Cann, (Miss) J. Y., and Taylor, (Miss)
A. C., potential of the Ag(s),AgI(s),I'
electrode, A., I, 519. Thermodynamics of lead iodide, A., I, 618.

Cannan, R. K. See Wilson, Hildegarde, Cannavà, A. Sco Sanfilippo, G.
Cannegieter, D., analysis of phthalate

resins, B., 61.
Cannella, C. See Costa, D.

Canneri, G., and Bigalli, D., determination of bismuth as 8-nitroquinoline bismuthi-iodide, A., I, 151. Solubility of thallium salts of fatty acids; separation of solid from liquid acids, A., II, 4.

and De Pava, A. V., catalysis of sul-phuric acid by vanadium in contact

process, B., 434.
Cannon, C. Y., Espe, D. L., and Thomas, B. H., relation of vitamin-E to sterility in dairy cows, A., III, 497.

See also Shoptaw, L. Cannon, G. E. See Reistle, C. E., jun.,

and Standard Oil Development Co. Cannon, H. G., biological stain for general purposes, A., III, 334. Cannon, W. B. See Rosenblueth, A.

Cannoni de Degiorgi, A., and Zappi, E. V., aromatic fluoro-derivatives, A., II, 239.

Canon, B. C. See Canon, E. H. Canon, E. H., and Canon, B. C., water-

proof material and preparation of the aggregate contained therein, (P.), B., 1057.

Cant, F. J. J. van, substitute for natural rubber, (P.), B., 1246.

Cantarow, A., and Nelson, J., serum-phosphatase in jaundice, A., III, 300.

and Stewart, H. L., alteration in serumbilirubin and bromosulphalein retention in relation to morphological changes in liver and bile passages in cats with total biliary stasis, A., III, 12.

Stewart, H. L., and McCool, S. G., serumphosphatase in cats with total bile stasis, A., III, 98.

Cantieni, R., photochemical formation of peroxides. VII. Oxidation of acctic, propionic, butyric, and isovaleric acids by molecular oxygen with ultra-violet light. VIII. Oxidation of glycol by molecular oxygen in ultra-violet light. IX. Oxidation of paracetaldehyde by molecular oxygen in ultra-violet light, A., I, 318; II, 270.

Cantignon, E., rust protection of under-

water [steel] surfaces by means of zinc,

B., 682.

Canton Stamping & Enameling Co. See Bebb, H. T

Cantoni, G. See Bergami, G.

Cantuniari, I. P. See Nenitzescu, C. D. Capatos, L. See Perrakis, N.

Capdecomme, L., and Jacquet, P. A., reflective power of copper, A., I, 351.

and Jouravsky, G., indicatrices of reflecting power of crystals of low absorbing power, A., I, 173.

Capel, L. W. See Hoogstraten, C. W. van. Capel, W. H. See De Haas, W. J.

Capetti, A., and Segre, M., influence of motor fuel on lubricating oil, B., 518. Capper, B., decoration of pottery, glass, and similar articles, (P.), B., 441.

Capraro, V. See Zagami, V. Caprio, A. F., and Celluloid Corp., moulding composition, (P.), B., 1373.

Capron, P., and De Hemptinne, M., electronic diffraction study of bromochloroform, A., I, 69.

and Perlinghi, (Mme.) S. L. T., structure of dichlorodibromomethane, A., I, 172. See also De Hemptinne, M., Savard, J.,

and Wouters, J.

Capstaff, J. G. See Eastman Kodak Co. Carayon-Gentil, A. See Corteggiani, E.

Carbery, M., annual report of the Assistant Director of Agriculture, Bengal; agricultural chemists' section, March, 1934, B., 1251.

and Chakladar, M. N., soil moisture. I. Movement under field conditions, B., 1096.

Carbide & Carbon Chemicals Corporation. and Cox, H. L., β -chloroethyl β -chloroethoxyethyl ether, (P.), B., 23*. Preservation of organic solvents, (P.), B., 325.

Cox, H. L., and Carruthers, T. F., mixedester derivatives of glycol[s] and compositions containing the same, (P.), B., 65. Purification of dialkyl sulphates, (P.), B., 212.

Cox, H. L., and Greer, P. S., esters, (P.), B., 525.

Cox, H. L., and Roper, T. D., jun., dialkyl ethers of glycol, (P.), B., 525. and Douglas, S. D., vinyl resins, (P.),

Eastman Kodak Co., and Branchen, L. E., composition [for coating cellulose esters], (P.), B., 262.

Law, C. H., and McNamee, R. W., alcohol sulphation process; alkyl hydrogen sulphates, (P.), B., 117.

and Perkins, G.A., $[\beta-]$ chloro $[-\Delta^{\alpha\gamma}-]$ butadiene, (P.), B., 20.

and Ray, A. B., deposition of silica on [building] material, (P.), B., 244. Mould [for casting stainless steel], (P.), B., 248.

and Reid, E. W., safety glass, (P.), B., 441.

and Robertson, H. F., polyvinyl acetal resins, (P.), B., 470.

Carbide & Carbon Chemicals Corporation, and Shoemaker, M. J., removal of water of gelation [from films], (P.). B., 128.

and Vaughn, T. H., hydrolysis of organic esters of inorganic acids, (P.), B., 1170. and Walters, C. H., maleic acid, (P.), B., 758.

and Warren, R. F., phonograph record [from vinyl resin], (P.), B., 63.

and Wickert, J. N., succinic acid esters of $2-[\beta-]$ ethylhexan-l-[a-]ol, (P.), B., 214

Wickert, J. N., and Freure, B. T., oxygenated aliphatic compounds, (P.), B., 418.

and Wilson, A. L., morpholino and homologues thereof, (P.), B., 121. Morpholine vinyl ethers and Nbismorpholinium halides, (P.), B., 422. Morpholine alkanols, (P.), B., 1179.

Carbo-Norit Union Verwaltungs-Ges.m.b.H., extraction of motor fuels by distillation of crude benzenes, (P.), B., 15. Adsorption or absorption processes [for coal gas], (P.), B., 112. Concentration of active carbon, (P.), B., 207. Treatment of gases containing polymerisable substances, (P.), B., 644. Positive cleetrode for galvanic cells, (P.), B., 1231. Drying and cooling of adsorbents, (P.), B., 1287.

Carbondale Machine Corporation, chilling apparatus, particularly for liquids, (P.), B., 302.

Carbone, D., purification of retting water, B., 890.

Carboni, G., heat economy in Italian sugar factories, B., 605.

Carbonic Co. of America. See Ragonnet, E. L.

Carborundum Co., [lining for] rotary cement and lime kilns, (P.), B., 39. Crystalline [refractory] compositions containing chromium oxide, (P.), B., 39. Refractory articles, (P.), B., 39*. Heat-conducting walls, (P.), B., 140. Abrasive articles, (P.), B., 140, 914, 1207. Granule-coated webs, (P.), B., 140, 242. Bonded abrasive blocks, wheels, or discs, (P.), B., 242. Abrasive grain and rubber mixes for manufacture of bonded abrasive articles, (P.), B., 347. Resin-coated abrasive grain for abrasive articles, (P.), B., 442. Abrasive-coated webs, (P.), B., 1054. Abrasive-coated fabric, (P.), B., 1343.

Benner, R. C., and Banmann, H. N., jun., ceramic body, (P.), B., 441.

Benner, R. C., Banmann, H. N., jun., and Easter, G. J., silica refractory articles, (P.), B., 1207.

Benner, R. C., Easter, G. J., and Thompson, A. J., silicon carbide refractory, (P.), B., 1207.

Benner, R. C., and Melton, R. L., abrasive-coated articles, (P.), B., 1053. Abrasive-coated fabrics, (P.), B., 1053.

Blau, H. H., and Banmann, H. N., jun., furnace lining and material therefor, (P.), B., 1207.

and Nelson, C. S., rubber-bonded abrasive articles, (P.), B., 674. Carboxhyd, Akt.-Ges., saccharates, (P.), B.,

Cárcamo Márquez, V., chemical analysis of thirty Peruvian mineral waters, A., I,

Cardia, F., tests of mixtures of tar and

powdered rock asphalt, B., 1055. Cardin, A., and Pinotti, O., extraction of nucleoproteins from liver and muscle, A., III, 168.

and Zambotti, V., positive electric charge on erythrocytes, A., III, 163.

Cardinal Products, Inc. See Berthold, R. E. Cardinale, G., blood-creatinine in dementia præcox, A., III, 13. Cardoso, H. See Cole, H. I.

Caress, A. See Renfrew, A.
Carey, H. H. See Woodall-Duckham (1920), Ltd.

Carey, (Miss) I. P. See Algar, J. Carey, J. S., commercial aspects of thermal polymerisation [of hydrocarbon gases], B., 407.

Carey, W. F. See Imperial Chem. Industries.

Carey Manufacturing Co., P. See Greider, H.W.

Cario, G., and Stille, U., excitation and ionisation in active nitrogen, A., I, 589. Carius, C., can welded seams of nobler metal shorten the life of boiler plates?

Carkuff, F. B., sediment-detecting device, (P.), B., 304.

Carleton, P. W. See Du Pont de Nemours & Co., E. I.

Carli, B., and Airoldi, R., determination of formaldehyde and benzaldehyde by means of chloramine-I', B., 756.

Carlinfanti, E., and Balestrieri, F., influence of temperature on sedimentation velocity of erythrocytes, A., III, 449.

Carling, H. F. See Wilson, G. S.
Carlisle, P. J. See Du Pont de Nemours & Co., É. I.

Carlock, H. A. See Smith, L. P.

Carlsen, E., emission of electrons from substances of varying thickness and atomic number by means of hard y-rays, A., I, 593.

Carlsohn, H., and Neumann, P., reincekates of heterocyclic bases, A., II, 39.

Carlson, E. W. See Standard Oil Development Co.

Carlson, G. H. See Michael, A.

Carlson, J. F., and Oppenheimer, J. R., multiplicative showers, A., I, 213.

Carlson, J. M. See Rysselberghe, P. van. Carlson, R. J. Sec Langer, T. W. Carlson, R. W., results of recent cement research and their partial application,

See also Brown, L. S., and Davis, R. E. Carlton, R. See Christensen, B. E. Carlton, R. P., and Minnesota Mining &

Manuig. Co., adhesive or binder [for sandpaper], (P.), B., 140.
Carlyle, E. C. See Fraps, G. S.
Carmichael, E. A. See Bolton, B., and

Cumings, J. N.

Carmichael, E. B. See Tribby, W. W. Carmichael, H. G., purification of com-

mercial carbon dioxide, (P.), B., 668.
Carminati, V. See Rondoni, P.
Carmody, M. O., and Carmody, W. H.,

polymerisation of terpenes, A., II, 381. See also Carmody, $W. \dot{H}$.

Carmody, W. H., and Carmody, M. O., polymerisation of isoprene, A., II, 479. See also Anderson, G. K., Carmody, M. O., and Sheehan, W. E.

Carne, W. M., and Martin, D., relation of internal cork of apples and cork of pears to boron deficiency; preliminary experiments in Tasmania, B., 603.

Carnegie Steel Co. See McIntosh, James. Carnegy-Potts, A. W. K. Seo Kinetic Elutriators.

Carney, B. R. See Crosby, R. H.

Carney, S. C. See Shell Development Co. Carnie, J. See McKinnon & Co., W.

Carnot, P., Cachera, R., and Melik-Ogandjanoff, T., coefficient of retention of Congo-red in rabbit's plasma (method of Adler and Reimann), A., III, 196.

Carobronze Röhrenwerk Ges.m.b.H., shaped bodies made from bronze with high antifriction or sliding properties, (P.),

B., 691.

Carolus, R. L., effects of magnesium deficiency in soil on yield, appearance, and composition of vegetable crops, B., 169. Relation of potassium, calcium, and sodium to magnesium deficiency [in soils], B., 596. Rapid chemical tests for determining untrient deficiencies in vegetable crops, B.,

and Brown, B. E., magnesium deficiency [in soils], B., 596.

See also Hester, J. B.

Caron-Claeysen. See Fleury, P.

Caronna, G., action of diazomethane on formaldehyde, A., II, 135.

Caroselli, A., stability of bitumen emulsions, B., 244.

Carothers, W. H. See Du Pont de Nemours & Co., E. I.

Carpéni, G., dissociation constants of reductic acid and of its product of oxidation by iodine, A., I, 85. Dissociation constants of d-glucoascorbic acid and of its product of oxidation by iodine; ultra-violet absorption spectra of dglucoascorbic acid, A., I, 462.

Carpenter, A. W. See Smith, W. L.

Carpenter, B., and Fisher, R. A., excitation of sodium hyperfine structure in a mole-

cular beam, A., I, 539.

Carpenter, D. C., and Lovelace, F. E., influence of neutral salts on optical rotation of gelatin. V. Rotatory dispersion of gelatin in sodium bromide solutions, A., I, 134.

See also Dahlberg, A. C.

Carpenter, G. B. See Du Pont de Nemours & Co., E. I.

Carpenter, I. C. See Moorman, A. R. Carpenter, L. G., and Harle, T. F., specific

heat of iodine, A., I, 175.

Carpenter, L. V., and Pyle, G. R., lime

demand of acid water, B., 625.

Carpenter, M. D., and Sharpless, G. R., effect of vitamin-B and iodine on the weight, iodine content, and structure of the thyroid gland of the rat, A., III, 494.

Carpenter, M. S., Kunz, E. C., and Givaudan-Delawanna, Inc., protocate-chualdehyde, (P.), B., 120. Carpenter, M. T. See Standard Oil Co.

Carpenter, O. K., and Dnraloy Co., glass

moulding material, (P.), B., 672. Carpenter, T. M., constancy of the atmosphere with respect to carbon dioxide and oxygen content, A., I, 203. Effect of galactose on human respiratory quotient and alveolar carbon dioxide, Å., III, 464.

and Lee, R. C., effect of galactose on metabolism of alcohol in man, A., III, 470. Effect of glucoso on metabolism of alcohol in man, A., 111, 470. Effect of fructose on metabolism of alcohol in man, A., III, 470.

Carpmael, A. See I. G. Farbenind.

Carp's Garenfabrieken N.V., J. A., dyeing fibrous materials with vat dyes, (P.), B.,

Carr, C. J. See Beck, F. F., Dozois, K. P., and Krantz, J. C., jun. Carr, D. E. See Union Oil Co. of Cali-

Carr, E., reversible splitting of organo-mercuric cyanides with hydrogen chloride, A., II, 312.

Carr, (Miss) E. P., and Stücklen, (Miss) II., ultra-violet absorption spectra of simple hydrocarbons. III. In vapour phase in the Schumann region, A., I,

and Walker, (Miss) M. K., ultra-violet absorption spectra of simple hydrocarbons. I. Av-n-Hepteno and tetra-

methylethylene, A., I, 61. and Walter, (Miss) G. P., ultra-violet absorption spectra of simple hydro-carbons. II. In liquid and solid solution phase, A., I, 61.

Carr, J. M., fertilisers for tobacco, B., 1389.

Carr, P. H. See Schickele, E. Carr, W. G., Abbott, W. O., and Sample, A. B., intubation of human small intestine. IV. Chemical characteristics of intestinal contents in fasting and as influenced by administration of acids,

alkalis, and water, A., III, 202. Carranza, F., and Barcellos, J., simplified molecular constant of milks from Lima

and Callao, B., 79.

Carranza, M., origin of "salitre," A., I, 383. Carré, P., and Passedouet, H., influence of the terminal group on m.p. of normal chain aliphatic compounds, A., I, 175.

Carrell, W. A., accelerated ageing of distilled

liquors, (P.), B., 1259.

Carrelli, A., fields acting inside ferromagnetic materials, A., I, 18. Absorption of liquid oxygen, A., I, 207. and Cennamo, F., intensity of the Raman

continuum in alcohol-benzene mixtures, A., I, 497.

Carrero, J. G., determination of bismuth in medicines, B., 1406.

Carrero, J. O., cane syrup, B., 827. Carretta, U. See Mameli, E.

Carrick, L. L., and Beaudine, F., skinning of varnishes, B., 1371.

Carrie, C., and Mallinckrodt-Haupt, A. S. von, porphyrin formation by pathogenic fungi of the skin, A., III, 180. See also Schrens, II. T.

Carrier, E. W. See Standard Oil Develop-

ment Co. Carrier, $W.\ H.$, contact-mixture analogy applied to heat transfer with mixtures of air and water, B., 507.

and Mackay, C. O., review of existing psychrometric data in relation to practical engineering problems, B., 507.

Waterfill, R. W., and Carrier Eng. Corp., refrigeration, (P.), B., 1145.

Carrier Engineering Corporation. See Carrier, W. H., and Yaglou, C. P.

Carrière, E., and Guiter, H., precipitation and determination of vanadates, A., I, 377.

and Lautié, R., formation of molybdenum oxides Mo₃O₈ and Mo₂O₅, A., 1, 42,

Carrington, J. H., development and use of modern compounding materials [for rubber], B., 1090.

Carrisson, G. See Chodat, F.

Carroll, D., heavy mineral assemblages of soils from goldfields of Western Australia, A., I, 156.

Carroll, F. D., cerebrospinal fluid in tobacco-alcohol amblyopia, A., III, 11.0 Carroll, H. See Powers, P. N.

Carroll, J., raspberry beetle (Byturus tomentosus) and its control, B., 274.
Carroll, T., Faraday effect near isolated

band lines, A., I, 590.

Carruthers, C., Torrance, J. R., and Torrance & Sons, roller-and-breast bar mills, (P.), B., 1146.

and Torrance & Sons, roller mills for grinding paint and other substances, (P.), B., 856.

Carruthers, G. N. See Baker, W. Carruthers, T. F. See Carbide & Carbon Chemicals Corp., and Union Carbide & Carbon Corp.

Carson, F. L., and Pacific Lumber Co., artificial lumber and pressed and moulded products, (P.), B., 350.

Carson, F. T., micro-burette for testing

absorptiveness of thin paper, B., 427.

Carson, H. J., carburetted water-gas, (P.), B., 14. Combustible gas, (P.), B., 1158. Carswell, T. S., and Doubly, J. A., germicidal action of benzylphenols; effect of formulation with sulphonated oil,

Doubly, J. A., and Nason, H. K., bacterial control in air conditioning, B., 297.

and Monsanto Chem. Co., separation of m-ercsol from m-ercsol-p-cresol mix-tures, (P.), B., 528. Separation of cyclic alcohols from their ketones, (P.), B., 529.

Cartan, L., application of electronic optics to mass spectrography, A., I, 49. Focussing beams of rapid positive ions; application to mass spectrography, A., I, 332.

Carteni, A., and Morelli, A., composition of muscle of marine animals. tein of muscle of Octopus vulgaris, Lam. VI. Nitrogenous extractives of muscle of Palinurus vulgaris, Latr., A., III, 199.

See also Becchini, G. Carter, A. G., and Travers, M. W., thermal decomposition of methyl nitrite, A., I, 313.

Carter, A. H., Moulds, L. de V., and Riley, H. L., the solid carbon-oxygen complex. I. Oxidative action of graphitic oxide and active carbon plus oxygen on some aromatic amines, A., II, 409.

Carter, A. S. See Dn Pont de Nemours & Co., E. I.
Carter, B. C. See Swan, A.
Carter, B. M. See Gen. Chemical Co.

Carter, H. D., apparatus for producing

hydrogen, (P.), B., 1047.
Carter, H. E. See Schiltz, L. R., and West, H. D.

Carter, F. R. See Brooks, D. B.

Carter, N. M., nutritive value of marine products. VIII. Proximate analysis of canned British Columbia sockeye and pink salmon, B., 973. Measurement of pilchard oil in bulk, B., 1082.

Carter, P. G. See Imperial Chem. Industries.

Carter, P. L. See Terrell, H. T. Carter, R. H., removal of insecticidal

residues from fruits and vegetables, (P.), B., 979.

and Fahey, J. E., removal of insecticidal residues from fruits and vegetables, (P.), B., 979.

Carter, R. H. C. See Fisher, E. A. Carter, R. M., functions of solvents and diluents in nitrocellulose lacquers, B.,

Carter, W. W., and Morton, B., dispersal of [fibrous] matter in manufactured

material, (P.), B., 29.
Cartiaux, J. See Meurice, R.
Cartland, G. F., and Kuizenga, M. H., preparation of extracts containing adrenal cortical hormone, A., III, 38. Bio-assay of adrenal cortical extract: direct comparison of rat and dog units, A., III, 278. Extraction of adrenal cortical hormones, (P.), B., 1273.

and Nelson, J. W., extracts containing gonad-stimulating hormone of pregnant mare's serum, A., III, 321.

Cartwright, C. H., quasi-crystalline structure of water from infra-red data, A., I, 548. Absorbing and reflecting powers of electrolytes in the far infra-red, A., I, 613. Cartwright, H. W. See Chaplin, R.

Carnsi, A. See Maymone, B.

Carver, E. K. See Eastman Kodak Co. Carver, J. S., and Heiman, V., protein requirement of growing chicks, B.,

1404.

and Lightfoot, F. M., salmon oils as a source of vitamin-D for growing chicks, B., 1404.

See also Heiman, V.

Carvin, F. D., spectrum of hydrogen sulphide in the photographic infra-red, A., I, 166.

Cary, C. A. See Shinn, L. A. Cary, M. K. See Apperly, F. L. Cary, R. C., Vitcha, J. F., and Shriner, R. L., optically active quaternary ammonium salts from d- and l-\$-octyl p-bromobenzenesulphonate and tert .- amines, A., II. 10.

Casaburi, V., and Corradini, C., determination of "degree of stability" of [vegetable-tanned] sole leather, B., 818.
Casassa, M. T., Corynebacterium diphtheriæ, A., III, 397.
Casberg, C. H., and Schubert, C. E., durability of moulding sands, B., 354.

Caserio, E., new salt of emetine, A., II, 394. Chemico-physical constants of wheatgerm oil, source of vitamin-E, B., 697.
Chemical composition and nutritive value of "grape honey," B., 975.
and Erba, I., composition of gorgonzola

cheese as related to quality, B., 834.

Casey, H. W., and Alexander, J. C., recovery of caustic hydroxide from waste solutions, (P.), B., 907.

Cashman, R. J., effect of temperature on photo-electric emission, A., I, 591.

Casida, L. E., relative gonadotropic augmentative action of plasma and formed elements from the blood of cattle, A., III, 39.

Casimir, H. B. G., magnetic interaction in the deuteron, A., I, 7.

Casini, V. See Passerini, M.

Casler, H., treatment of photographic pictures with developer and other liquids, (P.), B., 984.

Cason, J., and Anderson, Rudolph J., lipins of tubercle bacilli. L. Phthiocerol in wax of bovine tubercle bacillus, A., III, 358.

Caspar, E. See Ruggli, P. Cass, O. W. See Du Pont de Nemours & Co., E. I.

Cassan, H., thermal conductivity of refractories, B., 1206. Thermal conductivity of refractory materials, B., 1341.

Cassel, H. M., stability of emulsions, A., I. 303.

Cassen, B., and Condon, E. U., nuclear forces, A., I, 6.

Cassidy, H. G., fume absorber for Kjeldahl digestions, A., I, 635.

See also Rider, T. H.

Cassidy, P. R. See Bailey, E. G. Cassidy, T. A., Wilmot, H. F., and Wilmot & Cassidy, Inc., testing petroleum hydrocarbons, (P.), B., 1013.

Cassil, C. C., [determination of] arsenic [in organic matter], A., II, 358.

See also Haller, M. H.

Cassol, B., and Moneta, G. B., apparatus for filtration of infusions, (P.), B., 994. Castan, R., and Chouard, P., effect of various hormones on growth of plantules and development of their roots, A., III,

J., [copper-aluminium] alloys Castel, A.P. 33 and A.P.M., B., 1357.

Castellani, E., soil micro-organisms and cationic absorption; variations in the Ca/Mg ratio, A., III, 35. Urea metabolism in relation to terrestrial dynamics. A., III, 487. Coffee leaf-fall (Hemileia vastatrix, B. and Br.), B., 825.

Castellani, T. See Dogliotti, G. C. Castellino, P. G., action of enzyme ex-

tracts on soluble keratin. II. Papain

type, A., III, 354.
Caster, A. B. See St. John, I. L.
Castex, M. R., and Arnaudo, A. F., phenols in biological fluids and their relation to phenolæmia, A., III, 201. Retention of phenols in blood in a case of mercuric chloride poisoning, A., III, 479.

and Re, P. M., alterations of blood-amino acids in pathological con-ditions, A., III, 451.

Castiglioni, A., system α-naphthol-salicylic acid, A., I, 464. Reaction between formaldehyde and naphthols, A., II, 413. New photo-reaction of pyridine, A., II,

Castilla, M. M., nutritive value of commercial peptones, A., III, 467.

Castille, A., apparatus for determination of the hydrogenation index, A., II, 222.

Castle, E. S., origin of spiral growth in *Phycomyces*, A., III, 485. Membrane tension and orientation of structure in the plant cell wall, A., III, 498. Castle, G. C., furnaces for aluminium alloys,

B., 796.

Castle, J., preheating in dry purification

[of coal gas], B., 863.

Castle, W. B. See Taylor, F. H. L.

Castles, J. T., jun., plastic sheet compositions, (P.), B., 468.

Casto, L. V., and Oxford Varnish Corp.,

obtaining a decorating surface [resembling wood grain], (P.), B., 814. Castricum, M. See Scroggie, A. G.

Castro, R., oxygen in steel, B., 919.

See also Portevin, A.
Castro Mendoza, H. J. See Jimenez Diaz, C.

Catalyst Research Corporation, determining a characteristic of a gas, (P.), B., 1150.

See also Bennett, O. G.

Catchpole, H. R. See White, Abraham.
Cathcart, W. H., determining bread flavour, B., 1398.

See also King, C. V. Catherall, A. C. See Marrisou & Catherall, Catherwood, R., and Stearns, G., creatine and creatinine excretion in infancy, A., III, 298.

Catlin, C. H. See Coombs, H. I.
Catlin, W. E., physicochemical studies of organometallic and furan compounds, A., II, 313.

Catoire, M. See Malfitano, G. Cattan, R. See Fiessinger, N.

Cattaneo, C., enzymic hydrolysis of melibiosecarboxylic acid, A., III, 180.

Gabbrielli, M. C., and Scoz, G., activation of alkaline phosphatase by magnesium salts, A., III, 270. Phosphatases and activation by magnesium salts. II. "Alkaline" phosphatase of the "Alkaline" phosphatase of the placenta, A., III, 270.

and Scoz, G., electrometrie determination of esterase activity of blood, A., III,

See also Scoz, G.

Cattaneo, L., origin of folliculin and gonadotropic hormones, A., III, 491.

Cattelain, E., and Chabrier, P., separation of the phosphoric ion and its volumetric determination, A., I, 530.

and Couchet, G., potentiometric researches on fumaric, maleic, and succinic acids,

Cattell, M., and Goodell, H., mechanism of the action of digitalis glucosides on

muscle, A., III, 425. Cattell, R. See Perkin, H. J.

Catts, D. D., household ammonia, B., 1042. Cauchois, (Mlle.) Y., Labsorption spectrum and characteristic levels of mercury, A., I, 159. Weak emissions in the L spectrum of rhenium (75), A., I, 159. L emission and absorption spectra of rhenium and its characteristic levels, A., I, 487. La satellites for some heavy elements and rare earths, A., I, 541.

Cauer, H., effect of air-borne iodine from Brittany on the iodine supply in central

Europe, A., III, 389.

Caughlan, W. M., Rounsavell, O. N., and Lindner, I., apparatus for reclaiming fine (flour) gold from concentrates, (P.), B.,

Caughley, F. G. See White, Philip. Caujolle, F., elimination of nickel in bile, A., III, 297. Elimination of molybdenum in bile, A., III, 347. Elimination of einchonine and einchonidino in the bile, A., III, 469. Biliary elimination of quinidine, A., III, 469. and Laffite, S., toxicology of cobalt, A., III, 218.

Caulfield, T. H. See Hay, R.

Caulfield, W. J., and Martin, Williard H., influence of homogenisation on curd tension of milk, B., 1398.

and Riddell, W. H., factors influencing acidity of fresh cow's milk, A., III, 376. See also Martin, Williard H., Riddell, W. H., and Whitnah, C. H.

Cauquil, (Mlle.) G. See Godehot, M. Cautter, C. T. See Bataafsche Petroleum

Maats.

Cauwenberg, W. J. See United Color & Pigment Co.

Cauwood, J. D., and Dimbleby, V., analysis of simple glasses, B., 137.

Cavallaro, L., absorption bands in polar substances at very high radio-frequencies. I. and II., A., I, 601.

Cavalli, F., and Patania, A., combined effect of local anæsthetics. II. Percainecocaine and percaine-tutocaine, A., III,

Cavallini, G. See Bachstez, M. Cavallone, G. See Ponte, A. Cavanagh, R. F., magnaflux inspection of boiler drums and unfired pressure vessels, B., 794.

Cavanaugh, G. W., disposal of dairy effluents, B., 626.

Cave, H. W., Riddell, W. H., and Hughes, J. S., digestibility and feeding value of Russian thistle hay, B., 1129.

Riddell, W. H., Hughes, J. S., Whitnah, C. H., and Lienhardt, H. F., factors influencing mineral metabolism of dairy animals, A., III, 472.

Cavezzale, C., alkali silicates, (P.), B.,

Cavinato, A., valentinite from the Ballao mine, A., I, 587.

Cawley, C. M., desulphurisation of oils, B., 640.

and King, J. C., hydrogenation-cracking of tars. III. Effect of certain variables in a continuous plant, B., 1296. See also Hall, C. C.

Cawood, W., and Patterson, H.S., determination of at. wts. by means of the microbalance, and values obtained for carbon, nitrogen, and fluorine, A., I, 56.

Cayla, J., disturbances of calcium and phosphorus absorption, A., III, 307. Cayzer, W. J., flotation of gold ore at the

Bibiani mine, B., 685. Cazzola, E., modern [textile] assistants and

soap substitutes, B., 538. Ceaglske, N. H., and Hougen, O. A., drying granular solids, B., 851.

Cecchetti, P. See D'Antoni, A.

Cecil, R. L., non-specific protein therapy, A., III, 254.

Cederquist, K. N. Sce Bergström, II. Cedrangolo, F., oxidation of pyruvic acid by liver enzymes, A., III, 138. Amylase in subcutaneous adipose tissue, A., III, 269. Mobilisation and formation of glycogen and fats in enervated muscle, A., III, 387. Amylase activity

of adipose tissue, A., III, 394. and Conte-Marotta, R., influence of choline on lipin metabolism, A., III, 18. Action of choline on the fatty liver due to phloridzin, A., III, 265.

See also Quagliariello, G. Cela Holding Soc. Anon., and Seri-Holding Soc. Anon., obtaining rapid coagulation of rubber [latex], (P.), B., 1379.

Celanese Corporation of America. See Eichengrün, A., Janett, H., and Seymour, G. W.

Celastic Corporation. See Cameron, E. H., Fausse, J., and Hamilton, R.

Celebi, M., transition of amorphous to crystalline carbon, A., I, 556.

Cella, C., and Georgescu, I. D., effect of purine bases and their derivatives on urcteral peristalsis, A., III, 350.

Celli, V. See Galamini, A. Cellière, S. See Chambon, M.

Cellin, F., modern raw materials for leather finishes, B., 1238.

Cellovis, Inc. See Hoffman, W. F.

Celluloid Corporation, ribbons of foils, films, etc., containing cellulose derivatives, and wires and other articles covered therewith, (P.), B., 29. Tubes and other hollow articles from thermo-plastic compositions, (P.), B., 158. [Injection-moulding device for] pro-duction of moulded articles, (P.), B., 265. Lubricating compositions, (P.), B., 413.

Celluloid Corporation, sheet materials, (P.), B., 430. [Ornamental] films and foils of cellulose or cellulose derivatives, (P.), B., 430. Cleaning of air or other gases, (P.), B., 742. Treatment of gases containing organic vapours, (P.), B., 757. Manufacture and treatment of articles containing cellulose derivatives, (P.), B., 1240. [Injection] moulding of organic materials, (P.), B., 1373. Manufacture of nitrocellulose compositions, (P.), B., 1376.

See also Brown, Joseph H., and Caprio, A. F.

Celmer, R. F., and Cruess, W. V., canning of apple juice, B., 1263.

Celon Co. See Olson, J. E.

Cennamo, F., Raman effect with aqueous solutions of alkali chlorides, A., Î, 496. See also Carrelli, A.

Center, R. D., inductive heating of process equipment, B., 581.

Centnerszwer, M., mechanism of solution of pure metals and alloys, A., I, 417.

and Blumenthal, M., dissociation of lithium nitrate, A., I, 185. Dissociation of silver nitrate, A., I, 185.

and Heller, W., mechanism of the solution of metals, based on adsorption theory, A., I, 367.

Kwiatkowski, K., and Szper, J., galvanic cells or electrical accumulators, (P.), B., 694.

and Szper, J., electrolysis of salts in anhydrous glycerol, A., I, 254.

Centola, G., structure of cellulose acetate soluble in acetone or "cellite," A., I, 68. Hydration and structure of starch, A., I, 80. Stabilisation of nitrocellulose, B., 424. Relations between structure and mechanical properties of cellulose acetate films and threads, B., 424.

See also Parravano, N.

Central Commercial Co. See Gundlach, II. R., and Smith, P. R.

Central Institute of Aviation Fuels & Oils, purifying [fuel] oils with selective solvents, B., 1297.

Central Paper Co. See Wright, H. E. Central Scientific Co. See Hornberger, C. S. Central Tool Co. See Jacques, F. O.

Centrifix Corporation. See Hawley, C. G. Cera, B., and Lombroso, C., specific dynamic action of proteins in fasting

animals, A., III, 465.
Cerchez, V., Arion, E., and Niculescu, V., plasticity range of Rumanian bitumens, B., 748.

Cerekel, H. O. H., screening and dewatering [of coal and coke], B., 743.

Cerecedo, L. R., and Hennessy, D. J., use of synthetic zeolites in the isolation of vitamin-B₁. I. Experiments with rice polishings, A., III, 439. and Kaszuba, F. J., use of synthetic

zeolites in the isolation of vitamin- B_1 . II. Experiments with brewers' yeast, A., III, 439.

and Pickel, F. D., pyrimidines. I. Preparation of 6-hydroxy-2-methylpyrim-idine-5-acctic acid and its derivatives, A., II, 469.

and Thornton, J. J., use of synthetic zeolites in the isolation of vitamin- B_1 . III. Experiments with wheat germ, A., III, 439.

and Tolpin, J. G., thiazoles. I. 4-Methylthiazole-5-acetic acid and its derivatives, A., II, 472.

Ceri, M. E., and Smith, Lloyd B., electrical dehydration of oils, (P.), B., 15.

Cerkovnikov, E. See Prelog, V

Cernatescu, R., analysis of the powder which fell on 26 April, 1928, A., I,

and Ornstein, I., micro-determination of alcohol in blood and other biological fluids, A., III, 113.

Papafil, (Mmc.) M., and Poni, (Mlle.) M., constitution of compounds of cyclic diamines with metallic salts, A., II,

and Poni, (Mlle.) M., compounds of cyclic diamines with metallic salts; zinc salts, A., II, 185.

and Ralea, R., potentiometric titration of bromine and bromates by thiosulphate, A., I, 260.

See also Atanasiu, I.A.Cernuschi, F., conservation of energy and Shankland's experiment, A., I, 7.

Cernuschi, P., neutrons, A., I, 491. Ceřovská, (Miss) J., circular ultra-sonic grating in liquids, A., I, 557.

Cerri, F. See Nuccorini, R. Cervellati, L. See Corazza, M.

Cesa, I. See Giroud, A.

Césari, E., and Boquet, P., antigens of venins and antibodies of venin sera. IV. Action of a bivalent antivenin serum (Bitis arietans+Sepedon hæmachates) on homologous and heterologous venins, A., III, 85. Detoxication of Vipera aspis venom by sodium ricinoleate and vaceination of rabbits with the detoxicated venom, A., III, 251.

Cesáro, G., and Melon, J., crystalline form

of acmite, A., I, 484.

Cestari, A., effect of sulphur on development of tubercle bacilli and on experimental pulmonary tuberculosis, A., III, 182. Factors influencing permanency of colloids in [blood-]circulation. I. Dyes and the coagulability of blood, A., III, 371.

Chabanier, H., Guillaumin, C. O., Laudat, $M_{\cdot \cdot}$, Lévy, Max, Paget, $M_{\cdot \cdot}$, and Vaille, $C_{\cdot \cdot}$, blood-chloride, A., III, 337.

Chablay, A. See Gault, H. Chabot, G., drawing off beer in absence of air, B., 383. Stability of the colloids of beer, B., 966. [Physico-chemical] properties of [extracts of] hops, B., 1257. Chabrier, P. See Cattelain, E.

Chabrol, E., Cottet, J., and Cachin, M., cholesterolytic power of bile, A., III, 341. Is the cholesterolytic power of bile a function of its cholalie acid content? A., III, 341.

Cottet, J., and Sallet, J., blood-sugar of dogs during experimental cholæmia, A., III, 171. Effect of experimental cholæmia [in dogs] on adrenaline hyperglycamia, A., III, 171.

and Parrot, J. L., cholesterol content of blood-scrum, -plasma, and erythrocytes, A., III, 291.

Chabrolin, C., phenolic oils from coal tar for destroying weeds in cereals, B.,

Chadder, $W.\ J.$ See Thermal Industrial & Chem. (T.I.C.) Res. Co.

Chadeloid Chemical Co. See Bush, E. R., and Ellis, C.

Chadeyron, A. See Clews, F. H. Chadshinov, V. N., and Moiseenko, V. M., hydrogenation of crude anthracene by the Bergius method. I. Concentrated carbazole, B., 865.

Chadwick, C. G. See Electro Metallurg. Co. Chadwick, E. D. See Pratt, W. B.

Chadwick, L. C., chlorosis of pin oaks, B.,

Chaikin, S., viscosity of liquids, A., I, 125.

Chaikina, B. I. See Epelbaum, S. E., and Palladin, L. I.

Chaikoff, I. L., Gibbs, G. E., Holtom, G. F., and Reichert, F. L., lipin metabolism of the hypophysectomised dog and lipin and carbohydrate metabolism of the hypophysectomised-deparcreatised dog, A., III, 173.

and Kaplan, A., distribution of fat in the livers of departreatised dogs maintained with insulin, A., III, 345.

See also Kaplan, A., and Larson, P. S. Chain Belt Co. See Shafer, S., jun. Chainski, I. A., electrochemical studies of

humate formation, A., I, 189.

Chait, E. V. See Schorigin, P. P. Chait, S. S. See Rubentschik, L.

Chaix, P., action of sulphur compounds on glycolysis by Propionibacterium pentosaceum, A., III, 145. Influence of traces of oxygen on glycolysis by Propionibacterium pentosaceum, A., III, 273. Oxidation and fermentation of glucose by Propionibacterium pento-saceum, A., III, 273. and Fromageot, C., necessity of sulphur compounds for bacterial glycolysis,

A., III, 145. See also Fromageot, C.

Chakerburty, M. See Chopra, R. N. Chakladar, M. N. See Carbery, M.

Chakrabertty. See under Chakravarti. Chakraborty, J. N., applicability of alkaline permanganate for oxidation of organic matter in soils for mechanical analysis, B., 165.

Chakraborty, R. K., vitamin-C content of some Indian food materials, B., 976. and Gnha, B. C., ascorbic acid oxidase in plant and animal tissues, A., III, 352

and Roy, A. N., relation between composition of diet and urinary excretion

of ascorbic acid, A., III, 303.
Chakradeo, Y. M. See Kundargi, J. A.
Chakravarti, D., and Bagchi, P. N., synthesis of coumarins and chromones from 4-chloro- and 4-bromo-1-naphthol, A., II, 161. Limited applicability of Kostanecki's reaction, A., II, 161. and Banerji, B. C., synthesis of coumar-

ins and chromones from halogenoand nitro-cresols, A., II, 160. Constitution of nitro-\beta-methylumbelli-ferone methyl ether and of chlororesorcinol, A., II, 255.

Chakravarti, S. K., and Ganguly, P. B., Raman scattering of silicate solutions, A., I, 514.

Chakravarti, S. N., and Ganapathi, K., synthesis of o-cyano-aldehydes. I., A., II, 501.

and Roy, M. B., colorimetric test for novocaine and primary amines, B.,

Chakravarty, M. K., and Khastgir, S. R., unipolar electrical conductivity of carborundum, A., I, 284. Effect of heat on the unipolar electrical conductivity of carborundum, A., I, 444.

Chak ravarty, S. C. See Basu, K. P. Chakravorti, S. K., Stark effect in the rotation spectrum and electric susceptibility at high temperatures, A., I, 2.

Chalas, G., and Smirnova, A., rapid determination of completeness of oxidation in production of anthraquinone, B., 415.

Chalesova, A. T. See Tschumtov, K. V.Chalizev, A. A., and Kataluimov, M. V., micro-elements [in plant nutrition], B.,

Chalk, L. J., recovery of bitumen, B., 867. Anomalous results for soluble bitumen of natural rock asphalts, B., 1003.

Chalkin, F. C., and Hillson, S. P. La lines of some nickel alloys, A., I, 436. Chalkley, H. W., Amaba proteus as material for study of cell growth and division, A., III, 144.

See also Voegtlin, C.

Challacombe, C. N., and Almy, G. M., analysis of molecular ³II states with application to AlH, OH, and BH, A.. I. 441.

Challenger, F., and James, D. I., nitration of phenyl selenocyanate, A., II, 40.

and Rawlings, A. A., formation of organo-metalloidal and similar compounds by micro-organisms. Methylated alkyl sulphides; fission of the disulphide link, A., II, 271.

Challenor, W. A. P. See Imperial Chem. Industries.

Challinor, S. W. See Topley, W. W. C. Chalmers, B., micro-plasticity in crystals of tin, A., I, 19. Precision extensometer measurements on tin. A., I. 450. Influence of difference of orientation of two crystals on mechanical effect of their boundary, A., I, 605. Physical methods of metallurgy, B., 928. Surface tension and viscosity phenomena in tinplate manufacture, B., 1221. Physical methods in metal-lurgy. IV. X-Rays, B., 1356. See also Hoare, W. E.

Chalmers, J. A., and Pasquill, F., p.d. at an air-water interface, A., I, 140.

Chalon, O. T., p_H control and its relative importance in colouring paper, B., 227. and Soderberg, F. A., [papers] absolutely fast to light, B., 1190.

Chalonge, D., and Safir, H., variations of spectrum of y Cassiopeiæ, A., I, 105. See also Barbier, D.

Chalopin, H. See Giroud, A. Chambard, P., analysis of chrome-tanning liquors, B., 1094. Analysis of vegetable-tanned leather, B., 1095.

and Garnot, R., effect of different salt solutions on swelling of pelt, B., 816. Chamberlain, C. W., and Warren, K. L.,

wetting films, A., I, 26. Chamberlain, E. A. C., suction pyrometer for determination of gas temperatures up to 2000° F, B., 1286.

See also Kane, G. P.

Chamberlain, E. E., and Clark, P. J., nicotine content of tobacco, B., 728. Chamberlain, $K.\ A.$ See Haworth, $W.\ N.$ Chamberlain, $K.\ A.\ J.$ See Rowe, $F.\ M.$

Chamberlain, L. C. See Dow Chem. Co. Chamberlin, P. E. See Hall, V. E. Chambers, A. R. See Rule, H. G.

Chambers, F. S., jun., and Sherwood, T. K., equilibrium between nitric oxide, nitrogen peroxide, and aqueous solutions of nitric acid, A., I, 185.

Chambers, L. A., emission of visible light from cavitated liquids, A., I, 353. Influence of intense mechanical vibration on proteolytic activity of pepsin, A., III, 140.

See also Flosdorf, E. W.

Chambers, R., and Grand, C. G., chemotatic reaction of leucocytes to foreign substances in tissue culture, A., III,

and Kempton, R. T., elimination of neutral-red by the frog's kidney, A., III, 476.

and Kopac, M.J., coalescence of living cells with oil drops. I. Arbacia eggs immersed in sea-water, A., III, 475.

Kopac, M. J., and Grand, C. G., living cell; physical properties and microchemical reactions, A., III, 172

See also Grand, C. G., and Kopac, M. J.Chambers, R. J., factors affecting dryer performance [of paper machines], B.,

Chambers, W. H. See Barker, S. B.

Chambon, M., Bouvier, J., and Duron, P., physico-chemical study of the solubility of caffeine in [aqueous] sodium benzoate, A., I, 566.

and Cellière, S., maternal and feetal blood: proteins and polypeptides, A., III, 2. Variations in blood-polypeptides and -proteins during uterine involution in the post-partum period,

A., III, 3. Chamelin, I. M. See Harrow, B.

Chamie, (Mlle.) C., rapid identification of actinium, radiothorium, and mesothorium, by their γ -radiation, A., I, 376.

Chaminade, R., transformation of potassium in soil into the non-exchangeable state, B., 71. Soil- $p_{\rm H}$, B., 594. Reversion of potassium in soil. B., 595. Evaluation of the lime requirements of soils, B., 954.

Champagne Paper Corporation, paper pulp from fibrous materials, (P.), B., 430.

Champetier, G., and Fauré-Fremiet, E., X-ray study of the structure of elastoidin fibres, A., I, 350. X-Ray study of an intracellular protein, A., III. 376.

and Regnaut, P., electrolytic fractionation of lithium isotopes, A., I, 254.

Champion, F. C., and Barber, A., production of positron and electron pairs by bombardment of mercury with β -particles of low energy, A., I, 488.

Champion Fibre Co. See Murdock, H.R.Champlin Refining Co. See Slater, E.J.Champy, C., inhibiting action of testo-

sterone on the plumage of a castrated Sebright cock, A., III, 321.

Chan, G. A. See Jasjukevitsch, S. M. Chance, P. K., aminoplastics, B., 943.

Chandelle, R., gravimetric determination of zirconium using disodium methylarsinate, A., I, 634.

and Etienne, H., gasometric determination of carbon dioxide in natural carbonates, A., I, 375.

Chandlee, G. C. See Geist, H. H.

Chandler, D. See South Metropolitan Gas

Chandler, \underline{L} ., \underline{jun} . See Lilienfeld, J. E. Chandler, R. F., jun., relationships between calcium and oxalate contents of foliage of certain forest trees, A., III, 499.

Chandler, S. C., liquid applications to control peach borer and lesser peach borer, B., 713.

See also Flint, W. P.

Chandler, T. W., siphon-starting device, A., I, 380.

Chandler, W. H., and Hildreth, A. C., how freezing kills plant tissue, B., 597. See also Hoagland, D. R.

Chandler, W. L. See Hassid, W. Z. Chandler, W. P., jun., and Blaw-Knox Co., contact apparatus for liquid and gas, (P.), B., 741. Effecting contact between liquids and gases, (P.), B., 1290. Chaney, F. V., and Pine Kindler Corp., fire kindler, (P.), B., 1299.

Chaney, L. V. See Schulze, W. A.

Chang, C. C. See Chou, T. Q.

Chang, H. L. See Geyer, J. C. Chang, H. Y., and Chang, T. H., rate of reaction in vanadium contact sulphuric acid process, B., 234. Extraction of soya-bean casein, B., 1126.

Chang, K. C., and Chao, Yung S., cotton-seeds. IV. Extraction of cottonseed

protein, B., 1125. Chang, K. P. See Liu, S. H.

Chang, K. S. See Sah, P. P. T.
Chang, M. C., and Sah, P. P. T.,
derivatives of cyclopentanone, A., II,

Chang, S., Patras, M. C., and Templeton, R. D., dietary factors influencing cardiac rigor in albino rats, A., III, 381.

Chang, T. H. See Chang, H. Y. Chang, T. L. See Riesenfeld, E. H. Chang, T. S., an extension of Bethe's theory of order-disorder transitions in

metallic alloys, A., I, 559. Chang, Ta Y., Ch'en, K. J., and Yin, C. L., thermal conductivity of kaoliang board, B., 332.

and Kao, P., thermal decomposition of

copper acetate, B., 1016.

Wu, C., and Liu, C. C., activation of charcoal by superheated steam. I. Time and temperature of activation,

A., I, 41. Chang, Tsien Y. See Hohorst, G.

Chang, W. S. See Kao, Chung Hsi.
Chang, W. Y., Goldhaber, M., and Sagane,
R., radioactivity produced by \(\gamma\)-rays
and neutrons of high energy, A., I, 390.

and Szalay, A., formation of radio-aluminium (28Al) and the resonance effect of 26Mg, A., I, 389. See also Lewis, W. B., and Waring,

J. R. S.

Channon, H. J., and Doran, K. M., reproduction in rats receiving milk diets, A., III, 466.

Jenkins, G. N., and Smith, J. A. B., deposition of fat in liver and carcass of the rat on diets high in fat and low in lipotropic factors, A., III,

Platt, A. P., and Smith, J. A. B., dietary prevention of fatty livers; two analogues of choline, A., III, 468.

and Tristram, G. R., effect of administration of squalene and other hydrocarbons on cholesterol metabolism in the rat, A., III, 260.

Channtin, A., and Lndewig, S., renal insufficiency produced by partial nephrectomy. V. Diets containing whole dried meat. VI. Relation between kidney function, kidney weight, and surface area in intact and unilaterally nephrectomised rats fed whole dried meat diets. VIII. Comparison of the urea (Addis) ratio with results of other tests of renal function, A., III, 14.

See also Lndewig, S.

Chao, C. Y., and Fu, C. Y., resonance levels of neutrons in silver nuclei, A., I, 161, 211.

Chao, I. P., response of skeletal muscle to changes in p_H, A., III, 176. Influence of electrolyte content on muscular contractility, irritability, and neuromuscular transmission, A., III, 176. Reaction of amphibian skeletal muscle to calcium ion and ionisation of calcium citrate, A., III, 389. and Chen, K. T., osmotic properties of

isolated amphibian skeletal muscle,

A., III, 176.

Chao, P. See Meyer, Julius.
Chao, T. P., systematic analysis of anions,
A., I, 96, 374.
Chao, T. Y. See Tseng, C. L.

Chao, Y. S. See Tang, T. H.

Chao, Yung S., cottonseeds. III. Production of gasoline from cottonseed oil foots, B., 1005.

See also Chang, K. C. Chaplin, C. A. See Coste, J. H.Chaplin, E. J. See Mann, F. G.

Chaplin, H. O., and Hunter, L., associating effect of the hydrogen atom. I. Amides and sulphonamides, A., I, 513.

Chaplin, \hat{R} ., and Cartwright, H. W., apparatus for partial saturation of gas with vapour, B., 197.

Chapman, C. F., and Kraft-Phenix Cheese Corp., emulsifying apparatus, (P.), B., 305. Emulsifying method, (P.), B.,

Chapman, $C.\ H.$ See Gen. Electric Co. Chapman, $D.\ L.$, and Reynolds, $P.\ W.$ catalytic combination of hydrogen and oxygen at the surface of platinum, A.,

Chapman, E. A. C. See Townend, D. T. A. Chapman, E. M., fractional phthalein test [of kidney function], A., III, 476.
Chapman, F. H. See Lee, F. E.
Chapman, G. H., Berens, C., and Nilson, E. L., streptococci. III. Preliminary

attempts to correlate resistance to chemicals, etc. with pathogenic effects, A., III, 226.

and Curcio, L., streptococci. II. Quantitative differences in resistance to sodium bicarbonate and hexylresorcinol, A., III, 226.

and Lieb, C. W., leucotriphenylmethanes as reagents for bacterial polysaccharides, A., III, 100. and Bawls, W. B., streptococci. I.

Qualitative difference in resistance to various_agents, A., III, 226.

Chapman, H. D., Vanselow, A. P., and Liebig, G. F., jun., production of citrus mottle-leaf in controlled nutrient cultures, A., III, 499.

Chapman, R. W., petrology of the syenite stock of Cherry Mountain, New Hampshire, A., I, 206.

Chapman, S., auroral and night-sky light, A., I, 208. Carrier mobility spectra of spray electrified liquids, A., I, 498. Spray electrification, A., I, 521. Cosmic rays and magnetic storms, A., I, 546.

Chappaz, G., growth equilibria in the vine, B., 1387.

Chappel Brothers, Inc. See Meyer, A. E. Char, T. L. R. See Ghosh, J. C.

Charachorin, F., and Elovitz, S., oxidation of carbon monoxide on manganese di-oxide. IV. Adsorption of carbon monoxide and dioxide at low pressures, A., I, 36.

Charch, W. H., Hershberger, A., and Dn Pont Cellophane Co., moisture proof material, (P.), B., 1193.

Charch, W. H., Hyden, W. L., Siemann, J. C., and Dn Pont Cellophane Co., moistureproof material, (P.), B., 228.

Underwood, W. F., and Dn Pont Cellophane Co., cellulose structure, (P.), B.,

Chard, J. W. See Parker, H. C.

Chargaff, E., separation of choline and ethanolamine, A., II, 232. Occurrence in mammalian tissue of a lipoid fraction acting as inhibitor of blood clotting, A., III, 293.

Bancroft, F. W., and Stanley-Brown, M., chemistry of blood coagulation. III. Chemical constituents of blood platelets and their rôle in blood clotting; activation of clotting by lipins, A., III, 4.

and Bovarnick, M., isolation of glucos-amine, A., II, 233.

Charin, A. N., Deev, I. T., and Protasov, P. N., changes in composition and properties of Viatka glauconites after industrial use, B., 1199.

See also Schmuk, A. A.

Charin, S. E., bound water in control of sugar manufacture; determination of hydrophily of precipitates obtained during clarification of intermediate products by lead acetate, B., 605.

and Maltzev, P. M., physico-chemical properties of beer colloids, B., 719.

See also Dnmanski, A. V.

Charin, S. I., and Smirnova, L. G., use of nephelometer for polydispersity analysis, A., I, 331.

Charipper, H.A. See Gordon, A.S.Charit, A., and Schretter, A., metabolism during muscular work. I. Fat metabolism, A., III, 211.

Chariton, J. B. See Appin, A., and Belaev, A.F.

Charlamov, V. N. See Goltz, L. N. Charlampovitsch, A. B. See Lozovoi,

A. V., and Postovski, I. J.Charlampowicz, B. See Latkowski, J.

Charlesworth, J., carbonisation of fabrics,

(P.), B., 434.
Charley, V. L. S., commercial production of fruit syrups, B., 975. Fruit products. IX. Chemical constituents of fresh juices from single varieties of soft fruits, and suitability of the juices for syrup manufacture. X. Commercial pro-

duction of fruit syrups, B., 1126. Charlot, G., separation of phosphoric acid in qualitative analysis, A., I, 325. Quantitative separation of aluminium and ferric ions from calcium ions in presence of phosphoric ions, A., I, 477. Qualitative analysis [of the ions] of the ammonium sulphide group in presence of PO₄" ions, A., I, 477. Quantitative separation of ferric, aluminium, and chromic ions from ions of the ammonium

sulphide group, A., I, 477. Charlton, E. E. See Gen. Electric Co. Charlton, J., single-value soil properties: moisture at the sticky point and " R,"

B., 1096.

Charlton, R. W., and Day, A. R., isomerisation and hydration of pinene, A., II, 200. Carbamide derivatives in the alkanolamine series, A., II, 286. Charmandarian, M. O., and Kopeliovitsch,

E. L., influence of the total volume of pores in silica gels on adsorption of SO₂, A., I, 178. Adsorption of arsenic trioxide by various silica gels, A., I, Charmandarian, M. O., and Kotelevski, J. P., injector method of carbonation and absorption in the soda industry, B.,

Charmetant, C., electrolysis of ferrous chloride, bromide, and iodide and of ferric chloride in mixtures of water and ethyl alcohol, A., I, 144.

Charnley, F., colour in canned salmon, B., 82. Free oil content of canned salmon,

B., 282.

See also Goard, D. H.

Charpentier, P. G., Doladilhe, M., and Morel, C., antibody properties of the viscous protein of serum, A., III,

Charpy, G., definition of the gradation of steels, B., 1214. Determination of silicon in steels, B., 1351.

Charrier, G., and Ghigi, (Signa.) E., oxidative demolition of 6-phenylmesobenzanthrone with an alkaline solution of potassium permanganate, A., II, 154. Oxidative demolition of 6-phenylmesobenzanthrone with an acetic acid solution of chromic anhydride, A., II,

Charrin, V., by-products of gas manufacture; new use for anthracene oil, B., 515. Gas-purifying masses, B., 746.

Natural gas at le Bugey, B., 1297. Charriou, A., and Valette, (Mlle.) S., photographic emulsions for rapid [printing] papers, B., 188. Development and fineness [of grain] of photographic negatives, B., 844.
Charvát, J., vitamin therapy in non-

avitaminotic conditions, A., III, 493.

Chase, A. M., accessory photo-sensitive substance in visual purple regeneration, A., III, 341.

See also Hecht, S.

Chase, C. T. See Cox, R. T. Chase, G. F. See Standard Oil Co.

Chase, H., zinc die-castings, B., 144. Cellulose plastics, B., 367. Soya-bean plastics, B., 698.

Chase Companies, Inc. See Burghoff, II. L.

Chatagnon, C., bromine in gastric juice, A., III, 88. Gastric scerction of bromine during bromine therapy, A., III, 121. Urinary excretion of bromine after ingestion of sodium bromide, A., III. 121.

Chataignon, possibilities of flotation, B., 451. Flotation, B., 451.

Chatelain, P., p-azoxyanisole in solid, anisotropic liquid, and isotropic liquid states, A., I, 68. Is the birefringence of liquid crystals independent of the effect of the surroundings or the action of tho

magnetic field? A., I, 347.

Châtelet, M., partial precipitation cobalt by ammonia in excess and tho formation of cobaltoammine ions, A., I, 241. Kinetics of oxidation of cobalt in ammoniacal solution, A., I, 313. [Apparatus for determining the b.p. curve of two miscible liquids], A., I, 377.

Chatelet, R., thermochemical effects in the formation of eutectoids of binary alloys,

A., I, 297.

Chaternikova, L. N. See Ivanov, L. A. Chatfield, H. W., heat-treatment of varnish oils. I. and II., B., 586, 812. Metallic

finishes, B., 590. Chatfield, V. M., and Sun Oil Co., distillation tower, (P.), B., 1148.

"Chatillon" Società Anonima Italiana per le Fibre Tessili Artificiale, washing, desulphurising, bleaching, and dyeing of artificial [regenerated cellulose] yarns, (P.), B., 337.

Chattaway, F. D., Drewitt, J. G. N., and Parkes, G. D., action of diazonium salts on trichloro-α-nitro-β-acetoxy-

paraffins, A., II, 13. Chattaway, F. W., and Drew, H. D. K., chelation of diamines with cupric salts, A., I, 420.

Chatterjee, B. Sco Mukherjee, J. Chatterjee, D. W. Sco Roy, B. C. Chatterjee, H. N., and Halder, M. N., hæmatological studies in epidemic dropsy, A., 11I, 13.

Chatterjee, L. M. See Prosad, K.

Chatterjee, N., cod-liver oil emulsions; antagonism of emulsifying agents, B.,

Chatterjee, N. N., spiro-compounds. I. New route to spiro-compounds; synthesis of cyclohexanespirocyclopentane. II. Ring transformation into spirocompound from 4-methylcyclohexanone; new synthesis of cadalene. III. Synthesis of cyclohexanespirocyclobutane derivatives by the application of the Dieckmann reaction to esters of the tricarballylic series. IV. Formation of spirocompounds from cyclopentanone; synthesis of cyclopentanespirocyclopentane and its derivatives, A., II, 19, 62, 377, 418. Synthesis of diphenylyl acetates, A., II, 61. Phenanthrene from 9hydroxyphenanthrene, A., II, 145. Synthesis of cyclopentanespirocyclopentane, A., II, 489. Terpene compounds. I. Synthetic study on structure of azulene, A., II, 509.

Chatterjee, N. R. See Chopra, R. N. Chatterji, A. C., influence of lyophilic

colloids on wettability of naphthalene, A., I, 410.

Chatterji, D. N., Ganguly, K. R., and Faruqi, M. Z., determination of small quantities of arsenic in medico-legal cases, A., III, 246.

Chatterji, N. See Singh, B. K.

Chatterji, N. G., and Gupta, A. C., oil of nageshwar [ironwood] seed (Mesua ferrea), B., 696.

Chatterji, S. K. See Stewart, C. P. Chaudhuri, B. K., polarisation of Raman lines of some organic compounds, A., I,

Chaudhuri, H., and Kahali, B. S., rate of absorption of glucose from gastro-intestinal tract of the cat, and the effect of insulin on the absorption coefficient, A., III, 306.

Chaudhury, P. N. See Sen, S. C. Chaudhury, S. G., and Sen-Gnpta, J., relation between peptisation of a precipitate and its electrokinetic potential, A., I, 239. Electric charge of a precipitate formed in presence of excess of either of its constituent ions. I., A., I, 409. Chaudron, G., elimination of gaseous im-

purities from aluminium, B., 925. and Herzog, E., corrosion of iron, A., I,

196 See also Bénard, J., Lacombe, P., and

Portevin, A. Chaudun, (Mile.) A., pH [of sugar solutions] and hydrolytic power, B., 75. Rotatory power of lævulose in different media, B.,

Chaussain, M. See Ranque, G.

Chauveau, L., and Vasseur, A., composition of Moroccan wines, B., 830.

Chauvenet, (Mme.) G., and Valensi, G., velocity of oxidation of cobalt, A., I, 571.
Chavannes, H., "basiphosphate" and its cultural effects, B., 71.

Chavassieu, H., and Du Pont Rayon Co., artificial wool, (P.), B., 333.

Chaybany, A., chemical study of alkaline cyanide degreasing and coppering baths, B., 452.

Chaze, J., production of choline in rye-grass in relation to parasitism, A., III, 329.

Chazin, L. G. See Bogojavlenski, E. N. Cheatum, E. P., limnological investigations on respiration, annual migratory cycle, and related phenomena in fresh-water pulmonate snails, A., III, 465.

Chebotar, L. P. See Texas Co.
Checinski, J. See Turski, J. S.
Chédin, J., intensity and depolarisation of Raman lines emitted by sulphuric acidnitric acid mixtures, A., I, 112. Raman effect in sulphonitric mixtures, A., I, 598.

and Pradier, J. C., Raman effect and molecular structure of nitric anhydride, A., I, 9.

Cheesman, G. H., and Pike, R. J., efflorescence on cement renderings, B., 675.

Cheetham, H. C., urea-formaldehyde resin finishes, B., 945.

Cheetham, K. H., and Hey, D. H., migration reactions in polycyclic systems. II. Fries rearrangement of 4-acetoxydiphenyl, A., II, 336.

Cheftel, H., and Pigeaud, M. L., lead contamination of tinned sardines, B.,

835.

See also Giroud, A. Cheifetz, P. A. Sec Giršavičius, J. V. Cheifetz, S. A. Sec Bogdanov, S. V.

Cheifec, M., duration of acid reaction in digestive vacuoles of Paramecium caudatum as a function of $p_{\rm H}$ of external

medium, A., III, 223.
Cheltnam, C. H. See Gen. Electric Co.
Cheltnam, C. H. W. See Gen. Electric Co. Chemical Construction Corporation. See Bartholomew, F. J., Christensen, A., Dely, J. G., and Hechenbleikner, I.

Chem. Foundation, Inc. See Hale, W. J. Chem. Holding Corporation. See Richter, W. F.

Chemical Novelties Corporation. See Ginn, W.W.

Chemipulp Process, Inc. See Dunbar, $T. \tilde{L}.$

Chemisch-Pharmazeutische Akt.-Ges. Bad Homburg, bases for suppositories, (P.),

Chemische Fabrik R. Baumheier Akt.-Ges., anticorrosion coating composition, (P.), B., 1375.

Chem. Fab., J. A. Benckiser G.m.b.H., fulling or felting of wool or hair, (P.), B., 333.

and Draisbach, F., stable phosphoruscontaining cod-liver oil emulsions, (P.), B., 465.

Chem. Fabr. Buckau, potassium formate, (P.), B., 134.

and Deuts. Tornesit G.m.b.H., insoluble coatings, impregnations, mases, etc., (P.), B., 472.

Chem. Fabr. Budenheim A .- G., acid alkali

pyrophosphates, (P.), B., 437. Chem. Fabr. von J. E. Devrient Akt.-Ges., apparatus for spraying powdered substances, (P.), B., 994.

Chem. Fabr. Grünau, Landshoff & Meyer Akt.-Ges., impregnation of wood, (P.), B., 350. Cosmetic products, (P.), B., 981. Easily-crushed anhydrous borax, (P.), B., 1336.

Chem. Fabr. von Heyden A .- G., disinfection,

(P.), B., 626.

Chem. Fabr. vorm. Sandoz, 3:6-dihalogeno-2:4-dinitroanilines, (P.), B., 119. Chromable azo-dyes of the pyrazolone series, (P.), B., 222. [Acid] azo-dyes, (P.), B., 223. Anthraquinone dyes, (P.), B., 223. Wetting agents for alkali lyes, (P.), B., 539. Lysergic acid hydrazide, (P.), B., 621. Treatment of direct dyes [on the fibre], (P.), B., 663. Red azo-dyes, (P.), B., 763.

Chem. Fabr. J. Wiernik & Co., Akt.-Ges., diamino-alcohols of the aromatic series, (P.), B., 1024. Derivatives of barbituric acid, (P.), B., 1135.

See also Heilner, G.

Chem. Forschungsges. m.b.H., safety glass, (P.), B., 914. Polymerisation products, (P.), B., 1169. Artificial materials containing polymerised β -chloro- $\Delta^{\alpha\gamma}$ -butadiene, (P.), B., 1239.

Chen, A. L. See Chen, K. K.

Chen, C. Y., Tseng, C. L., and Sun, C. E.,

relation between atomic radii and b.p., A., I, 505.

See also Tseng, C. L.

Chen, G., attempts to produce antigonadotropic substance by use of serum or blood extract, A., III, 185.

Chen, J. S. See Lee, K. Chen, K. H. See Kao, C. H.

Ch'en, K. J. See Chang, Ta Y. Chen, K. K., Anderson, R. C., and Chou, T. Q., pharmacological action of four Corydalis alkaloids, A., III, 138.

Anderson, R. C., and Robbins, E. B., potency of the cardiac glueosides calotropin, a-antiarin, emicymarin, folinerin, and sarmentocymarin, A., III, 218.

and Chen, A. L., chemistry of Mu-fangchi, A., II, 127. Chen, A. L., Anderson, R. C., and Rose,

C. L., pharmacological action of tetrandrine, an alkaloid of Han-fang-chi, A., III, 138.

and Chou, T. Q., [pharmacological] action and toxicity of menisinc and menisidine, A., III, 138. Action of arasaponins A and B, A., III, 309.

See also Eekler, C. R., and Jensen, H. Chen, K. T. See Chao, I. P. Chen, Y. H., oxidation of ergosterol-B₃, A., II, 339.

Cheng, C. L., and Ma, W. C., effect of morphine injection on blood cells in normal individuals and in opium addicts, A., III, 425.

Cheng, C. T. See Miwa, T., and Yang, P. S. Cheng, F. W., and Tsao, C. N., fluorine content in Chinese common salt, B., 33.

Cheng, R. G., and Reid, E., balance experiments with fluorspar on rats, A., III, 479:

See also Reid, E.

Cheng, S. M. See Koo, E. C. Cheng, Y. C. See Hsieh, C. Y.

Chenoch, M. A., influence of iron salts on colour and physico-chemical properties of gelatin, A., I, 410. Cheradame, R. See Audibert, E.

Cheramy, P., and Lemos, A., micro-determination of manganese in biological products, A., III, 82.

Cheraskova, E., and Korsungskaja, E., direct determination of rubber hydrocarbon, B., 1377. Determination of free sulphur in rubber containing mercaptobenzthiazole and tetramethylthiuram disulphide, B., 1377.

Cherbuliez, E_{\cdot} , and Herzenstein, (Mme_{\cdot}) A_{\cdot} , determination of colloidal and polysulphide sulphur in sulphurous waters,

A., I, 197.

and Jeannerat, J., casein, A., II, 394.

Chern, K. See Hsieh, C. Y.

Cherpillod, F., analysis of cryolite, B., 1045. Cherry, R. H., measurement of direct potentials originating in circuits of high resistance, A., I, 582.

Cherry-Burrell Corporation. See Feldmeier, H.

Cheshire, A., determination of total solids of [vegetable] tan liquors, B., 951. Cheshunt Experimental Research Station,

seasonal and diurnal changes in water content of tomato seedlings, A., III, 365. Cheshunt Sand & Gravel Co., Ltd., and Squire, G. F., apparatus for extracting sand from a supply of sand and water, (P.), B., 349. Separating sand from a mixture of sand and water, (P.), B., 349.

Chesley, F. R., jun., treatment of vegetable fibrous material for production of cellu-

lose fibre or pulp, (P.), B., 128. Chesny, H. H., and Marine Chemicals Co.,

filter, (P.), B., 1147.

Farnsworth, W. H., Manning, P. D. V., and Marine Chemicals Co., magnesium products, (P.), B., 908.

and Marine Chemicals Co., magnesium hydroxide, (P.), B., 134.

Chester, A. E., and Ferro Enamel Corp., electrolytic pickling apparatus, (P.), B.,

Chester, K. S., liberation of neutralised virus and antibody from anti-serum-virus precipitates, A., III, 358. Separation and analysis of virus strains by means of precipitin tests, A., III, 358. Serological tests with Stanley's crystalline tobacco-mosaic protein, A., III, 358.

Chesters, J. H., and Lee, L., properties of magnesite and chrome-magnesite bricks, B., 1051. Grading of coarse refractory aggregates, B., 1341. Chevais, S. See Ephrussi, B.

Chevalier, J., and Chevalier, M., plants containing rotenone: Derris, cubé, timbo, B., 1131.

Chevalier, M. See Chevalier, J.

Chevalier, Raymond, and Mathien, (Mlle.) S., variation of magnetic susceptibility of hæmatite powder as a function of the size of the grains, A., I, 293.

Chevalier, René. See Guittonneau, G. Chevallier, A., determination of vitamin-A, A., III, 321.

and Choron, Y., spectrophotometric determination of ascorbic acid in tissues, A., III, 155, 282. Spectrophotometric determination of ascorbic acid in blood, A., III, 165. Vitamin-C in the brain and liver of the guinea-pig, A., III, 282.

Choron, Y., and Espy, L., seasonal variations of vitamin-A reserve and motor chronaxie in guinea-pigs, A.,

Chevenard, P., thermomagnetic investigation of heterogeneity of solid solutions, B., 920.

Chevenard, P., Hugnenin, L., Waché, X., and Villachon, A., new alloys of the invar type_susceptible to structural hardening, B., 796.

and Waché, X., intercrystalline corrosion of ferronickels containing chromium and carbon, when cold-worked after quenching from high temperatures,

B., 1061.

See also Portevin, A.

Chevillot, M. See Tournade, A. Chevillotte, R., use of aluminium in nitric acid industry, B., 576. Precautions taken with aluminium equipment [in brewing], B., 966.

Chewning, W. L., and United Engineers & Constructors, disc[-pile] filter, (P.), B., 5.

Cheymol, J., verbenalin, A., II, 7. Stachyose in the stems and roots of Verbena officinalis, L., and in the underground parts of V. venosa, Gill and Hook, A., III, 161. Decomposition and utilisation of verbenaloside by Aspergillus niger, A., III, 272. Drying of Verbena officinalis, L.; decrease in holosides and verbenaloside; slight increase in sugars, A., III, 333. Verbenaloside content of the cortex of roots of Cornus florida, L.; examination of the cortex of roots of Cornus mas, L., and Cornus sanguinea, L., for this heteroside, A., III, 333.

and Quinquaud, A., seasonal variation in serum-calcium; relationship with ovarian activity in the bitch, A., III, 321. Calcium in the hepatic and vesicular bile of the dog, A., III, 341. Seasonal variation of serum-calcium

in dogs, A., III, 372.
Chiancone, F. M., xanthurenic acid; elimination following parenteral administration of tryptophan, A., III, 178. Hypoglycemic action of insulin-tannic acid, A., III, 492. Urinary elimination of certain substances following administration of ascorbic acid, A., III, 496.

See also Musajo, L.

Chiang, M. C., and Tseng, C. L., preparation of p-bromobenzoic acid, A., II, 148.

See also Tseng, C. L.

Chiang, S. H. See Sah, P. P. T. Chibnall, A. C., Piper, S. H., El Mangouri, H. A., Williams, E. F., and Iyengar, A. V. V., wax from the leaves of sandal (Santalum album, L.), A., III, 503.

See also Blount, B. K.

Chicago Club, measurement of consistency of coating materials, B., 155.

Chicago Hydraulic Oil Co. See Paxton, B. Chicago Telephone Supply Co. See Schellenger, N. C.

Chick, H., vitamin standardisation, A., III, 323.

Chick, H. E. See Brown, T. F. K.

Chidester, G. H. [with Billington, P. S.], effect of varying concentration of com-bined sulphur dioxide in soda-base sulphite pulping [of wood], B., 425.

Chieff, A. See Auriechio, L. Chien, S. L., Chung, H. P., and Tai, H. C., effect of substituents on germicidal activity of phenols. I. Alkyl derivatives of 2:4-dibromophenol, A., II,

239. and Kuan, H. T., synthesis of halogenated thiocresols, A., II, 240.

Chien, S. L., and Lay, T. C., dipole moment of phenyl p-tolyl sulphide and covalency angle of sulphur, A., I, 499.

and Shih, T. M., resoreylaldoxime as a reagent for the colorimetric determination of ferric iron, A., I, 477.

Chierer, F., investigation of stability of lubricating oils by coking, B., 518.

Chigerovitsch, M. I. Sec Nemkova, O. G., Ordinskaja, E. S., and Petin, N. N. Child, R., analyses of Maldive copra, B.,

Childers, N. F., effects of sprays on growth and transpiration of tomatoes, B., 601.

See also Heinicke, A.J.

Childs, W. H. J., and Jahn, H. A., deformation vibration of the acetylene molecule, A., I, 218. Model of a vibrating molecule, A., I, 281.

Chiles, J. A., jun., investigations of vacuum sparks by means of a high-speed rotating

mirror, A., I, 539.

Chilouet, I. See Vavon, G.
Chilson, W. H., cause of off-flavours in market milk, B., 488.

Yale, M. W., and Eglington, R., detecting recontamination of pasteurised milk by bacteriological methods, B.,

Chilton, T. H., Duffey, H. R., and Vernon, H. C., absorption of gases in packed towers, B., 737.

Chilvers, C., petroleum products in the cable industry. I. Cable oils, B., 517.
Chimuschin, F. F., Sharov, G. I., and

Arlievski, P. D., special steels for urea synthesis apparatus, B., 792.

Chinn, B. D., reactions of staphylococci of food-poisoning types in gelatin, A.,

III, 182. Chinn, P., and Schmitt, F. O., birefringence of nerve sheaths as studied in

cross-sections, A., III, 456. Chiong, Y. S., viscosity of liquid sodium

and potassium, A., I, 125.

Chiplonkar, V. T., relative efficiencies of the multistage and one-stage process in electrolytic preparation of heavy water, A., I, 37.

Chipman, J., and Li, T., equilibrium in the reaction of hydrogen with iron sulphide in liquid iron and the thermodynamics of desulphurisation, B., 1212.

and Samarin, A. M., effect of temperature on interaction of gases with liquid steel, B., 679.

See also Urban, S. F.
Chistov, I. F., Vschivtzev, S. N., and
Vschivtzeva, M. M., attempts at reworking calcium acetate powder in the Ishevski chemical plant, B., 904.

Chitarov, N. I., drainage water from mines as a source of copper sulphate, B.,

905. and Ivanov, L. A., critical temperature of water and of aqueous solutions of sodium silicate, A., I, 560.

Chitre, R. G. See Niyogi, S. P.
Chittenden, E. See Rigg, T.
Chittick, M. B., and Pure Oil Co., lubricating oils, (P.), B., 1165.

Chittum, J. F., and Hunt, H., adsorption condenser and electromotive force, A., I, 187. Electrokinetic potential at metal surfaces, A., I, 310. Sec also Hunt, H.

Chitty, A. H. See Rhodin, B. E. F. Chiummo, (Signa.) C. See Foresti, B. Chlopin, N. J., accuracy of potentiometric titration in the oxidation-reduction reaction between bivalent iron and potassium dichromate, A., I, 478. Air-turbine stirrer for electrolysis and electro-titration, A., I, 535. Potentiometric titration in neutralisation reactions, with the system platinum-carborundum (graphite), A., I, 578. Deposition of manganese [in steel] at the mercury cathode, B., 52. Testing of protective coatings on ferrous metals, B., 446. Rapid potentiometric determination of iron and chromium in ferrochromium, B., 447. Potentiometric determination of manganese, chromium, and vanadium in alloy steels, B., 681.

Chlopin, V. G., and Gerling, E. K., fluorine derivatives of quadrivalent uranium, and the determination of uranium as fluoride,

A., I, 150. Chloride Electrical Storage Co., Ltd., electrodes [grooved pasted plates] of electric accumulators, (P.), B., 804. [Alkaline] electric accumulators, (P.), B., 1363. [Unspillable] electric accumulators and other galvanic cells [with liquid electrolyte], (P.), B., 1364.

Chloupek, J. B., and Danes, V. Z., electrochemical study of corrosion of metals,

Chmelevski, V. I. See Postovski, I. J.

Chmeliček, A., light bricks, B., 243.
Chmielewska, I., colouring matter of red cabbage. II., A., II, 71.

Cho, K. See Fukagawa, K. Choate, P. C. See Gilbert, C. G.

Choay, A., determination of folliculin in ovarian powders, A., III, 362.

Chobe, M. T., and Rao, B. S., essential oil from Atalantia monophylla, B., 1268. Chochlovkin, M. A. Seo Lebedev, S. V.

Chocolat-Magniez-Baussart. See Sornet, F. Chodat, F., and Carrisson, G., effect of sodium iodoacetate on respiration of

Staphylococcus aureus, A., III, 146. Choisnard, (Mlle.) A. See Barillet, F. Chojnacki, J. See Chrobak, L.

Cholak, J., spectrographic analysis of biological material. II. Bismuth, A., III, 108.

Hubbard, D. M., McNary, R. R., and Story, R. V., determination of lead in biological materials; comparison of spectrographic, dithizone, and s-diphenylcarbazide methods, A., III,

Cholevo, N. A., and Eitingzon, I. I., degree of purity of toluene, B., 116.

Choller, V. A. Sec Karavaev, N. M. Chollet, A., and Camus, A., fat of goat's milk, B., 387.

Cholmianskaja, S. M., determining moisture in sawdust and leather by the Dolch method, B., 331.

Cholnoky, L. von. See Zechmeister, L. Cholodni, H. G., theory of "yarovisation," A., III, 50.

Cholodny, N. G., and Sankewitson, E. C., influence of weak electric currents on the growth of the coleoptile, A., III, 498.

Chomiakov, K. G., Javorovskaja, S. F., and Arbusov, V. A., velocity of dissociation

of carbonates, A., I, 367. Chomlakovski, G. M. See Zinkov, Z. E. Chomikovski, P. M., stabilisation of suspensions and adsorption layers in disperse systems. XVI. Dispersity and stabilisation of soot suspensions in hydrocarbons, A., I, 238.

Chomse, H., organo-phosphors with inorganic ground-materials. I. Phosphors based on mono-alkaline-earth phosphates and free phosphoric acids. II. Oxygen-sensitive boric acid phos-

phors, A., I, 472, 473. Chong, L. P. See Rosedale, J. L. Chong, S. H. See Bodenstein, M.

Chopin, M. J. E., mixing and testing of dough, pastes, and other plastic materials, (P.), B., 511.

Chopra, N. N. See Bhatnagar, H. C.

Chopra, R. N., and Chowhan, J. S., snako bites and their treatment in India, A., III, 15.

Chowhan, J. S., and De, N., pharmacological action of camphor and its derivatives, A., III, 478.

Chowhan, J. S., and Gupta, J. C., biological assay of digitalis preparations in the tropics. VI. Comparative effects of Digitalis lanata, Ehrh., from Austria and Kashmir, and standard digitalis powder (B.P. 1932) on the mammalian heart, A., III, 478.

Das, N. N., and Mukherjee, S. N., activation of tissue-growth (in vitro) with cobra-venom, A., III, 477. Action of ajmalino on nerve impulses, A., III,

De, N. N., and Chakerburty, M., pharmacological action of tylophorine, the alkaloid occurring in Tylophora asthmatica, A., III, 309.

Dutt, A. T., Chatterjee, N. R., and De, N. N., chemical and pharmacological examination of Pcriploca aphylla, A., III, 191.

Ghosh, N. N., Bose, J. B., and Ghosh, Sudhamoy, chemistry and pharmacology of Tylophora asthmatica, A., III,

Mukherjee, S. N., and Gupta, J.C., protein fractions of blood sera. IV. Epidemic dropsy, A., III, 300.

and Roy, A. C., determination of minute amounts of atebrin in blood, A., III, 165. Colorimetric determination of lipoid phosphorus [lecithin] in the blood, A., III, 290. Indophenol-(2:6dichlorophenolindophenol-) reducing properties of urine, A., III, 459. Chor, H., Dolkart, R. E., and Davenport,

H. A., chemical and histological changes in denervated skeletal muscle of the monkey and cat, A., III, 388.

Chorine, V., serological reactions of euglobulins, A., III, 86. Blood-cholesterol and -lecithin in leprosy, A., III, 257.

Chorley, J. K., toxicity to fowls of sodium arsenite and poisoned locusts, A., III, 29. Choron, Y. See Chevallier, A.

Chotinski, E.S., mechanism of closure of the pyrrole ring in the dry distillation of

ammonium mucate, A., II. 386. and Alexandrova, E., preparation of trichloroacetic acid, A., II, 46.

Chotkevitsch, V. I. Sec Schubnikov, L. V. Chou, C. Y., and Wu, H., contents of sex hormones in normal and pathological urine, A., III, 320.

See also Chu, F. T., and Wu, H.
Chou, T. P. See Liu, Y. P.
Chou, T. Q., Chang, C. C., and Chu, H. P.,

bronchodilating substanco from earthworms, A., III, 477.

and Chu, J. H., saponins of Chinese drug, San-ch'i, Aralia bipinnatisida, A., II, 384.

See also Chen, K. K.

Christensen, B. V., and Gramling, L. G.,

biological assay of Gelsemium, B., 728.

Chouard, P., action of heat, light, and radiations on plants, B., 821. See also Castan, R.

Choudri, R. S. Seo Singh, B. N. Chovanskaja, A. Seo Volodutzkaja, Z. Choviakova, G. F. See Mokruschin, S. G. Chovin, P., Pechmann dyes, A., II, 150, 294, 512.

Chovin, P. E. M., and Gion, L. P. R. apparatus for determination of small proportions of carbon gases in gaseous

mixtures, (P.), B., 112.

Chow, B. F., antigenicity of new polysaccharide preparation in rabbits as shown by complement fixation, A., III, 117.

Lee, K., and Wu, H., chemical nature of antibodies, A., III, 116.

and Wu, H., isolation of immunologically pure antibody, A., III, 6. Isolation of immunologically pure antibody from the immune precipitate of pneumo-coccus, type I, A., III, 116. Recovery of antibodies from immune agglutinate of pneumococcus, type I, A., III, 116. Unitarian hypothesis of antibodies, A., III, 116. Isolation of a new fraction of protective antibody from immune rabbit serum of pneumococcus, type I, A., III, 116. Isolation of pure antibodies of pneumococci, types II and III, A., III, 116.

See also Lee, K., and Liu, S. C. Chow, R., Liu, F. Y., and Sun, C. S., extraction of alunite by potassium carbonate solutions for potassium and sulphur, B., 1045. Roasting of alunite at high temperatures for potassium, sulphur, and aluminium [recovery],

B., 1045.

See also Hohorst, G. Chow, S. C. See Shih, T. K.

Chow, T. S. See Tseou, H. F. Chow, T. Y., analysis of sodium glutamate condiments, B., 1402.

Chowdhury, D. C. See Sircar, A. C. Chowdhury, J. C., and Peacock, D. H.,

dihydrokurchine, A., II, 527. Chowhan, J. S. See Chopra, R, N, Chowieńczyk, T. See Józefowicz, E.

Chown, J. A., carbonisation and distillation of carbonaceous materials, (P.), B., 1300. Chrétien, A., and Eich, E., reaction between potassium iodide and bismuth tri-

iodide in acetone solution, A., I, 372. and Kraft, J., uranyl phosphites, A., I,

and Varga, G., tervalent manganese chloride, A., I, 94.
Chrétien, P. E. See Baur, E.

Christ, C. L. See Thornton, W. M., jun. Christ, R. E., and Fuson, R. C., applic-

ation of the principle of vinylogy to unsaturated ketones, A., II, 293. See also Fuson, R. C., and Hurd, C. D.

Christeleit, W. See Pfeiffer, P. Christen, C. See Berraz, G.

Christen, F., magnesium alloy, (P.), B., 934. Christensen, A., and Chem. Construction Corp., regeneration of [cuprous] absor-

bent liquids, (P.), B., 36.
Christensen, A. C., mullers, (P.), B., 302.
Christensen, B. E., and Carlton, R., capillary combustion unit for gas analysis

apparatus, A., I, 536. Williams, R. J., and King, A. E., organic oxidation equivalent analysis. III. General method using dichromate, A., II, 222.

See also Williams, R. J.

and Justice, R. S., species of the genus Monarda. I. Volatile oils. II. Alcoholic extractive and miscellaneous determinations. III. Ash analyses. IV. Histology of M. menthæfolia, var. leucantha, A., III, 330, 332; B., 497. and Lynch, H. J., pharmacology of

natural and synthetic camphor, A., III, 478.

Christensen, C. E. See Aarhus Oliefabrik A./S.

Christensen, C. H., preparation of food products from barley, soya beans, maize,

and ground nuts, (P.), B., 978.
Christensen, C. W. See Ralston, A. W.
Christensen, E. H. See Bang, O.

Christensen, F. W., Latzke, E., and Hopper, T. H., influence of cooking and canning on vitamin-B₁ and G- [-B₂] content of lean beef and pork, B., 82.

Christensen, H., Krogh, M., and Nielsen, M., and M., and Nielsen, M., and M., and Nielsen, M., and M., an

M., acute mercury poisoning in a respiration chamber, A., III, 218.

Christensen, J. J., and Kernkamp, H. C. H., toxicity of blighted barley to swine, B., 1265.

Christensen, J. T., rationalisation of the method of biological assay for corpus

luteum hormone, A., III, 278.
Christensen, L. M. See Hale, W. J., and McPherson, W. K.

Christensen, N. C., apparatus for treating mixtures of finely-divided solids and liquids in thickening and countercurrent

washing operations, (P.), B., 304. Christian, N. H. See Luth, A. T. Christian, S. M. See Jones, G. Christian, W. See Warburg, O.

Christiani, A. von, chemistry of carcinoma. III., A., III, 58.

and Pailer, M., fission of sterol digitonides and other molecular compounds by distillation in high vacuum, A., II, 497. Christiansen, E., and Ericsson, C. O., acration of cream, cake mixtures, etc., (P.), B., 304. Acrating fluids, (P.), B., 304. Christiansen, H., excretion of calcium, A.,

III, 203. Christiansen, Herman, iron in Norway; modern progress in electric smelting, B.,

Christiansen, J. A., and Asmussen, R. W., magnetochemical investigations. II. Complex platinum compounds, A., I. 174.

and Knuth, E., rate of thermal decomposition of ammonia on a quartz surface, A., I, 86.
Christiansen, L. C. See Koblianski, G. G.

Christiansen, W., sterilisation of medical solutions by filtration, B., 1407.

Christiansen, W. G., Harris, S. E., and Squibb & Sons, E. R., hydroxydiphenyl-isatin condensation products, (P.), B., 530.

Lee, J., and Squibb & Sons, E. R., solution of ergot alkaloids, (P.), B., 290.

See also Jurist, A. E., Lott, W. A., Moness, E., and Ort, J. M.
Christianson, I. F. See Taylor, S. S.
Christianson, W. O. Seo Dodds, H. H.
Christie, A. U. See Rinehart, J. F. Christie, B. A., washing of bottles, B., 240. Christitsch, I. K., rapid volumetric deter-

mination of pentosans, A., II, 446. Christman, A. A., Block, W. D., and Schultz, J., determination of carbon monoxide in air, B., 733.

Christman, C. C. See Levene, P. A. Christmann, L. J., Falconer, S. A., and Amer. Cyanamid Co., oxide [ore] flotation, (P.), B., 250.

See also Amer. Cyanamid Co.

Christmann, N., experience with gas flasks of light alloys, B., 247. Protracted corrosion tests with gas flasks of light alloys, B., 577. Gas flasks of light metals, B., 863.

Christoph, H., solubility of staple fibres, B., 1318.

Christoph, W., secondary production of electrons in the corona discharge at low pressures, A., I, 591.

Christopher, E. F., and Industrial Patents Corp., clear fish gluo or fish-gelatin solution, (P.), B., 1382.

Christopher, E. P., effect of flotation sulphur on carbon dioxide assimilation of apple leaves, B., 600.

Christy, W. G., the einder and fly ash public nuisance, B., 1143.

Chrobak, L., new mineral formations on silver coins of XV century, B., 796. and Chojnacki, J., striations of Laue

interference spots, A., I, 349. Chromates, Ltd. See under Gilbert, W. V. Chrometzka, F., purine metabolism in dogs; metabolic effects of reticulo-endothelial-active substances, A., III,

304. Dreyer, R., and Dümlein, K., purine metabolism in dogs; effect of metabolic condition on the inhibitory action of Indian ink on uricolysis, A., 111, 17.

and Schulte, J., degradation of insulin to a substance which increases the blood-sugar, A., III, 41.

and Wedderer, W., insulin resorption in

intestines, A., III, 322.
Chromov, S. I., cyclohexylcyclopentano and its transformations during hydrogenation-dehydrogenation catalysis, A., 11, 236.

Chruschtschev, V. See Vechsler, V. I. Chrysler Corporation. See Anderson, H. C., Heussner, C. E., and Lee, R. K.

Chrysostom, M. M., influence of several benzene derivatives on the roots of Lupinus albus, A., III, 410.

Chrzaszcz, T., hen eggs containing iodine, B., 181.

and Sawicki, J., influence of the protein content on the amount of amylase in barley and barley malt, A., III, 442. and Schillak, R., transformation of lactic acid by moulds, A., III, 70.

and Swiatkowska, W., effect of peptone, proteinases, and hydrogen sulphide on the amylase content of barley malt, A., III, 221.

and Zakomorny, M., physiological degeneration and regeneration of moulds producing citric acid, A., III, 432.

Chrząszczewska, A., and Dobrowolski, C., chloroamines. I. Azobenzene-p-sulphonic acid and certain of its derivatives, A., Il, 493.

Chu, (Miss) E. J. H. See Tseng, C. L. Chu, F. T., and Chou, C. Y., immunological potency of globulin prepared by precipitation with methyl alcohol, A., III, 55.

and Sung, C., effect of vitamin-C administration on vitamin-C of milk

and urine of lactating mothers, A., III, 104.

See also Sung, C.

Chu, H. P. See Chou, T. Q. Chu, J. H. See Chou, T. Q. Chu, S. P. See Shaw, D. T.

Chu, T. C. See Woo, S. C. Chuang, C. K., Tien, Y. L., and Huang, Y. T., synthetic studies in the sterol and sexual hormone group. I. Synthesis of a 3-keto-10-hydroxyhexahydrochrysene and its methyl ether, A., II, 294.

Chubb, M. F. See Harner, H. R. Chuck, F. Y., egg treatment and product, (P.), B., 495.

Chudjakov, V. N. See Sinani, S. S.

Chudoba, K., colour changes in zircon (hyacinthe) on heating, A., I, 102. Density and composition of plagio-clases on ternary basis, A., I, 204. Optical and double refraction of azircon, A., I, 204.

and Stackelberg, M. von, density and structure of zircen, A., I, 382.

Chuiko, V. T., elimination of traces of copper from natural water, B., 93.

Chung, H. P. See Chien, S. L.

Church, H. F., properties of hard rubber. Scleroscope resilience, B., 473.

and Daynes, H. A., properties of hard rubber. III. Effect of light, air, and humidity on surface resistivity, B., 703. Falling-weight impact test for chonite, B., 1378.
Church, J. W., McClure, R. R., and Pure

Calcium Products Co., treatment of whiting, etc., (P.), B., 342.

Churchill, H. V., Bridges, R. W., and Lee, M. F., determination of silicon in aluminium and aluminium alloys, B.,

Bridges, R. W., and Rowley, R. J., interference of phosphorus in determination of fluorine, A., I, 374.

Churchman, A. See Knapp, A. W. Chvilwitzki, G. I. See Bernstein, J. A. Chvostikov, I. A., fluorescence of platinocyanides, A., I, 113.

and Sevtschenko, A. N., applications of the polarimetric method to study of the upper layers of the atmosphere, A., I, 203.

Chwala, A., fifteen years of colloid chemistry in the textile industry, B., 231. Printing colours, (P.), B., 264. Colloidal methods of combating hardwater damage in textile processes, B., 432.

and Martina, A., anion and cation activity of soap-like colloidal electrolytes. II., B., 942.

Martina, A., and Becke, F., colloid chemistry of modern after-treatments for increasing fastness to water and

washing of direct dyeings, B., 336. See also I. G. Farbenind., and Waldmann, E.

Ciaccio, C., action of chemical reagents on striated muscle-fibres, A., III, 177. Progressive lipidosis. I. II. Separation of free cellular lipins. III. Free liverphospholipins of guinea-pigs poisoned by diphtheria toxin, A., III, 371.

Cianci, V., and Palmieri, C., orange-juice for the aerobic culture of anaerobic

bacteria, A., III, 399.

Cianciarulo, J. See Feemster, R. F. Ciatti, P., and Auerbach, R., effect of ascorbic acid on constituents of blood, A., III, 232.

Cicardo, V. H., and Hug, E., curare-like action of extracts of Erythrina crista galli, A., III, 478.

Ciccoli, Z. See Ferrari, A.

Ciccone, E. F. See Dorrance, G. M.

Cichocki, J., latent energy of solid solutions, A., I, 138. Theory of the diffusion of solids, A., I, 296. Thermionic emission of salts diffusing through copper, A., I,

Cicognani, E., respiratory capacity, gaseous exchange, alveolar tension, and circulatory transport in normal man, A.,

III, 163.

Cillié, G. G., state of ionisation and the absorption of energy in planetary nebulæ, A., I, 491. Woolley's theory of the hydrogen emission of prominences, A., I, 491.

See also Menzel, D. H.

Cincinnati-Dayton-Indianapolis & Columbus Club, properties of China-wood [tung] oil varnishes cooked at different temperatures, B., 155.

Cinecolor Inc., mordanting photographic

silver images, (P.), B., 984.

Cinema Development Co. See Briel, C. G.Ciocalteu, V., and Tanasesco, G., determination of the tyrosine index of serumpolypeptides, A., III, 248. index of serum-polypeptides; "tyrosine-reducing" value of trichloroacetic acid filtrates, A., III, 248.

Ciocca, B., ethyl acetoacetate and metallic copper, A., II, 440.

and Scattola, (Signa.) M., condensation of ethyl ethylideneacetoacetate in presence of sulphuric acid, A., II, 150.

Ciochina, I., determining specific gravity of liquids, A., I, 50. Extraction of metals from their sulphur-bearing ores, B., 146. Chemical behaviour of hydrogen [or steel melts] at high temperatures, B., 919.

Cioffari, B., structure of the X-ray K absorption limits of bromine, iodine, and of their

compounds, A., I, 273.
oglia, L.. "reconstructive value" of Cioglia, L.. purified proteins. I. and II. Feeding of rats with ovalbumin, caseinogen, gliadin, and gelatin, A., III, 259.

Ciolek, S. See Jablezynski, K.

Cioranescu, E. See Nenitzescu, C. D.
Cipolla, F. See Leone, P.
Cipriani, A. J. See Evelyn, K. A.
Cirelli, (Signa.) V. See Monti, (Signa.) L.
Circli, See Evelyn, C. D. Cirg, I. See Fabrikant, V.

Cirulis, A. See Straumanis, M. Cislaghi, F. See Schwarz, E.

Cisman, A., radioactivity of the water and mud of the lakes of Southern Bessarabia, A., I, 269.

Cities Service Oil Co. See Burch, E. F. Ciusa, R., and Brull, L., quinhydrones, A., 11, 460.

Ciusa, W., complex salts of phenylhydrazone-oximes [of diketones] and of phenanthraquinone-monooxime, A., II, 24.

Civin, H. See Hecht, M. Claar, E. See De Lucia, P.

Claasen, A. F. P. J. See N. V. Philips Glæilampenfabr.

Classen, A. W., tactical use of chemical weapons, B., 296.

Claassen, A. A., and Hyland, J. L., treatment of molten steel, (P.), B., 248.

Claassen, H., assimilation of alcohol and of amino-acids by yeast in the aëration yeast process, B., 176. Vapour-liquid mixtures; conditions in evaporators with transverse heating tubes, B., 300. Testing evaporating plant [in sugar factories], B., 380.

Claassen, H., maximum yields of yeast practically obtainable from sugar solutions, B., 484. Use of ammoniacal condensed waters for boiler feed, B., 627. Addition of activated carbon in the [sugar juice] evaporator, B., 717. Processes in synthesis of yeast cellsubstance, and maximal theoretical and practical yeast crops on sugar solutions, B., 965. Heat exchange in [continuousflow] evaporators with vertical [heating] tubes, B., 1141.

Claborn, H. V., and Haller, H. L., decomposition of fluorene- and fluorenee-2diazonium chloride in acctic acid, A., II,

Cladite, Inc., and Baron, H. L., protective coating, (P.), B., 1375. Protective coating composition, (P.), B., 1375. Claesson, M. See Swedenborg, H.

Claeys, J., Errera, J., and Sack, H., absorption of ultrasonic waves in liquids, A., I,

Claffey, J. B., Perry, J. A., and United Gas Improvement Co., gas filter, (P.), B., 1159.

Clancy, C. W. See Beadle, G. W.

Clapp, D. B., and Morton, A. A., condensation of aryl methyl ketones, A., II, 10. Preparation of p-phenyltriphenylcarbinol and existence of a metastable form, A., 11, 496.

Clapp, H. G. See Du Pont de Nemours & Co., E. I. Clapp, K. N., cause of chlorosis [of roses],

B., 712.

Clapson, W. J., litharge as accelerator for chloroprene plastic polymer[ide], B.,

Claque, J. A., Fellers, C. R., and Stepat, W., vitamin-C content of raw, cooked, and canned rhubarb, B., 614.

Clardy, F. B. See Langer, T. W. Clare, N. T. See Robertson, P. W.

Clarenburg, A., salt content of salt pork, B., 181.

Clarens, J., soils. · XIX. Lime requirement of soils, B., 268.

and Lacroix, J., soils. XVII. "Clay" in the agronomic sense. XVIII. Localisation of assimilable reserves, and their augmentation by mechanical action, B., 70.

and Margulis, H., soils. XX. Determination of lime requirements, B., 477.

Clark, A. See Wald, G.

Clark, A. A., and Hodsman, H. J., viscosimeter suitable for materials of high

viscosity, B., 400. Clark, A. B., and Technicolor, Inc., colour photography, (P.), B., 501.

Clark, A. J., action of narcotics on enzymes and cells, A., III, 390.

and Kingisepp, G., effects of low oxygen pressures on frog cardiac tissue, A., 111, 208.

Straub, W., Peters, R. A., Quastel, J. H., Ing, H. R., Gaddum, J. H., Yorke, W., and Danielli, J. F., chemical and physical basis of pharmacological action, A., III, 132.
Clark, A. N. See Woodall-Duckham

(1920), Ltd.

Clark, A. R. See Gregerson, H. J. Clark, C. B., and Amer. Cyanamid Co., production of sulphuric acid by the contact process, (P.), B., 436, 907. Sulphuric acid manufacture, (P.), B., 436. Mixed nitric and sulphuric acids, (P.), B., 1200.

Clark, C. F., harvesting, curing, marketing, and feeding sweet potatoes, B., 822. Feeding cottonseed products to beef

cattle, B., 838.

Clark, C. H. D., electronic periodic table,
A., I, 213. Calculation of constants for band spectra, A., I, 215. Systematics of band-spectral constants. I. Calculation of fundamental vibration frequencies of nonbydride di-atoms (XY type) of symmetrical molecular groups. III. Simple modification of Mutayama's relation connecting ground state frequencies of di-atoms XX in the same groups, A., I, 602.

and Scaife, C. W., systematics of bandspectral constants. II. Interrelation of fundamental vibration frequencies of symmetrical di-atoms (XX type) in the same molecular group, A., I,

and Stoves, J. L., appraisal of empirical formulæ relating equilibrium vibration frequency and distance in non-hydride di-atom nuclei, A., I, 67.

Clark, C. L., and Brown, R. S., chromenickel-molybdenum alloy [steel] for oil-still tube supports, B., 1296. New low-alloy pearlitic steel for high-temperature service, B., 1350.

Sec also Comstock, G. F., Hildorf, W. G., and White, A. E.

Clark, C. O., survey of progress in moth-proofing during 1928—1936, B., 130. Clark, C. W. See Giauque, W. F. Clark, Charles W. See Martin, O. C.

Clark, D. E., Green, H. C., and Kelco Co.,

alginic acid, (P.), B., 421.
and Murlin, J. R., effects of glucose, fructose, and galactose on ketosis produced by anterior pituitary extract

and by pancreatectomy, A., III, 385. Clark, D. G., physiology of Rhizobium species, A., 111, 316.

Clark, E. P., semi-micro-determination of acetyl, especially in O-acetyl compounds, A., II, 40. Quassin. I. Preparation and purification of quassin and neoquassin; their molecular formulæ, A.,

II, 297. Clark, Francis M., and Tanner, F. W., thermophilic canned-food spoilage organisms in sugar and starch, B., 836.

Clark, Frank M., non-inflammable dielectric organic liquids, B., 936. Dielectric strength of non-inflammable synthetic insulating oils, B., 1363.

and Snyder, E. A., testing for sludge formation in mineral transformer oil, B., 642.

See also Gen. Electric Co.

Clark, G. A. See Timperley, W. A. Clark, G. J. See Eastman Kodak Co.

Clark, G. L., principles of crystal growth, A., I, 16. The macromolecule and the micelle as structural units in biological materials, with special reference to cellulose, A., I, 29. Effects of X-irradiation on cell growth and structure, A., III, 132.

and Coe, W. S., photochemical reduction with X-rays and effects of addition

agents, A., I, 255.

and Gring, J. L., determination from modified absorption spectra measurements of carotenoids in yellow maize of different varieties and qualities, B., 969.

and Leppla, P. W., X-ray diffraction studies of built-up films, A., I, 18.

Clark, G. L., Mrgudich, J. N., and Schieltz, N. C., basic lead sulphates, A., I, 93. and Parker, E. A., diffraction of X rays at small angles by celluloses and rayons, A., I, 226. X-Ray diffraction

study of the action of liquid ammonia on cellulose and its derivatives, A., II, 447.

and Reynolds, D. H., zirconium dioxide; X-ray diffraction studies, A., I, 400. and Ross, S., diffraction of X-rays by

built-up films of proteins, A., I, 604. and Smith, A. F., measurement and interpretation of fibre diffraction patterns, A., I, 427.

Sterrett, R. R., and Lincoln, B. H., X-ray diffraction studies of lubricants. I. Structures of solid and of unimolecular films, and orientation effects of addition agents. II. Molecular regimentation and chemical reactions in liquid oils and blends. III. X-Ray method of rating lubricants in terms of protection against surface wear, B., 12. See also Mrgudich, J. N.

Clark, G. R. See Eastman Kodak Co. Clark, H. See Birch, F. Clark, H. E. See Pucher, G. W.

Clark, J. A., Smolens, H. G., Buffalo Electro-Chem. Co., bleaching [of textile

fabric], (P.), B., 231.
Clark, J. d'A., interpretation of [wood] pulp [evaluation] tests, B., 769.

Clark, J. H. See Rowntree, L. G. Clark, K. G. See Reed, D. L., and Royster,

P.H.Clark, L. H. Sec Lee, W. M.

Clark, M. M. See McKenzie, J. T. Clark, P. J. See Chamberlain, E. E. Clark, R. E. See Reyerson, L. H.

Clark, R. E. D., colorimetric determination of tin by means of tolueue-3:4-dithiol ("dithiol"), A., I, 581.

Clark, R. H. See Bremner, H. J., and Pyle, J. J.

Clark, R. O. J. See Topley, W. W. C. Clark, W., photography and chemical engineering research, B., 981.

Clark, W. F., impregnating beer wort with yeast, B., 278.

Clark. W. G., electrical polarity and auxin transport [in plants], A., III, 502.

Clark, W. J., automatic control of chemical processes, B., 399. Clark, W. M., Kjeldahl digestion apparatus,

A., II, 358.

Clarke, B. L., and Hermance, H. W., paper as a medium for analytical reactions. I. Improvements in the

spot test technique, A., I, 429.

Wooten, L. A., and Luke, C. L., analysis by "internal" electrolysis. I. Determination of bismuth and copper in lead alloys containing antimony and tin, B., 146.

Wooten, L. A., and Struthers, J. D., separation and determination of impurities in lead. I. Tin, B., 1064.

Clarke, G. R. See Fordyce, C. R. Clarke, H. T. See Darby, H. H., Eastman Kodak Co., and Ratner, S.

Clarke, J. S., application of practical thermodynamics in relation to design of furnaces, B., 299.

Clarke, L., dissociative adsorption of hydrogen by copper and its kinetic consequences, A., I, 457.

Kassel, L. S., and Storch, H. H., kinetics of activated sorption of hydrogen on chromic oxide gel, A., I, 299.

Clarke, L. A. Sec Texas Co. Clarke, M. F. Sec Cook, C. See Cook, C. A.

Clarke, P. S. See Union Oil Co. of California.

Clarke, S. G., clectrodeposition aud properties of black lead peroxide coatings, B., 684. B.N.F. jet test for local thickness measurement of nickel and other [metallic] coatings, B., 684.

Clarke, S. H., comparison of properties of timbers from tropical and north-

temperate regions, B., 556. Clarke, W. J. See Ives, H. E. Clarke, W. O. See Watson, C. J.

Clarke-Jones, N., crystal ice, B., 131. Clarkson, C. F. See Internat. Printing Ink Corp.

Clarkson, R. G. See Du Pont de Nemours & Co., E. I.

Clason, S. B. See Waters, J. I.

Classen-Nekludova, M. V., influence of increase of solidity in plastic flow on strength of rock-salt treated with water, A., I, 228. Influence of artificial damaging of surface on strength of rock-salt [crystals], A., I, 228.

Claude, Albert, preparation of an active agent from inactive tumour extracts,

A., III, 205.

Claude, André, and Soc. Anon pour les Appl. de l'Electricité & des Gaz Rares Établ. Claude-Paz & Silva, [electric-] discharge tube, (P.), B., 149.

Claude, D. See Schering-Kahlbaum, Akt. Ges.

Claude, G., coke-oven gas and synthesis of ammonia, B., 339.

Clauder, O. See Schulek, E. Claudin, J. See Soc. Anon. des. Nat. Col. & Prod. Chim. de St. Denis.

Claus, B., and Schmidt, E., production of disperse metal [systems] by ultrasonic [vibrations], A., I, 27.

Claus, E., sugar beet not inclined to run to seed, B., 709.

Claus, W., system copper-lead-nickel, A., I, 455. Separation process in crystal-lisation of Cu-Pb and Cu-Pb-X alloys (binary and polycomponent lead bronzes), A., I, 508. Refining of molten simple copper alloys in the foundry, B., 143. Aluminium-lead, B., 247. Deoxidation of copper and its alloys, B., 567. Inverse segregation [in leaded bronze], B., 569. Lead bronzes, B., 683. Theory of inverse segregation [of alloys], B., 1356.

and Bauer, W., inverse segregation and gas solubility in tin bronzes, B., 48. See also Ausschuss für Wirtschaftliche

Fertigung. Claus, W. D., and Hollaender, A., Geiger-Müller photon counter; quantitative aspects, detection of small intensities, use in absorption spectroscopy, A., I,

Clause, F. See Travers, A.

Clausen, F. W. See Freudenberger, C. B. Clausen, H., powder and rotation photographs of chiolith, A., I, 401.

Clausen, H. J. [with Mofshin, B.], effect of aggregation on respiratory metabolism of the brown snake Storeria dekayi, A., III, 258.

Claussen, M., bone content of fish and meat meals, B., 492.

See also Lembke, A.

Clawson, A. E., and Taylor Instrument Companies, hygrometric apparatus, (P.), B., 6.

Clawson, B. J., and Baker, A. B., relation of allergy to antibody content in animals vaccinated with B.C.G., A., III, 5.

Clay, J., ionisation by γ -rays and cosmic rays in gases at high pressure and high collecting fields, A., I, 491. Specific ionisation in air for cosmic rays and γ-rays, A., I, 491. Energy and penetrating power of the cosmic radiation, A., I, 545.

Hooft, C. G. 'T., Dey, L. J. L., and

Wiersma, J. T., experimental test of the super-nova hypothesis; intensity of cosmic rays in the earth's crust,

A., I, 162.

and Jougen, H. F., absolute intensity of cosmic radiation at sca-level, A., I, 109. Absolute intensity of ionisation by cosmic radiation at sea level, A., I, 213. and Karper, J. G., piezo-electric constant

of quartz, A., I, 290. and Kleef, G. van, ionisation by γ-rays and Röntgen rays in argon at high pressures; an absolute dose-

meter, A., I, 489.

and Oosthuizen, K., absolute intensity of ionisation in argon by cosmic radiation at sea level, A., I, 439.

Stammer, H. J., and Tijn, M. A. van, ionisation of y-rays in air at high pressure at various temperatures, A., Ī, 211.

and Tijn, M. A. van, determination of Eve's constant as proof for the saturation of the ionisation in air at high pressures, A., I, 491.

Wiersma, J. T., and Bruins, E. M., decrease of hard primary cosmic rays

in matter, A., I, 440.

Clay, J. P. See Whitehead, T. H. Clay Reduction Co. See Svendsen, S. S. Claypool, L. L. Sce Overholser, E. L. Clayton, B., and Refining, Inc., soap having

a definite water content, (P.), B., 587.

See also Refining, Inc.

Clayton, E., identification of dyes on textile fibres, B., 897. Detection of metals in fibrous materials, dyes, and organic pigmeuts, B., 1327.
Clayton, F. D. See M.-O. Valve Co.
Clayton, M. M., and Keith, J. D., vitamin-C

content of the human tonsil, A., III, 78. Clayton, W., theory of butter churning, B., 1123. "Glass" crystals in canned marine products, B., 1263.

Back, S., Johnson, R. I., and Morse, J. F., inhibited deposition of stearin from chilled olive oil, B., 58. Physicochemical investigation of chocolate fat

bloom. I., B., 975. and Morse, J. F., churning for butter, B., 723. Surface chemistry of butter

formation, B., 1124.

Clayton, W. J., and Vosbnrgh, W. C., zinc and zinc amalgam electrodes, A., I, 32.

See also Vosbnrgh, W. C. Claytor, E. E., breaking of petrolcum emulsions, (P.), B., 1304.

Cleaton, R. B. See Brooks, D. B. Cleaveland, J. B., waterproofing composition and method of waterproofing fabric, (P.), B., 1330.

Cleaves, H. E., and Thompson, J. G., preparation of iron oxide as source of high-purity iron, A., I, 422.

Clegg, R. R. See Tomlinsons (Rochdale), Ltd.

Cleghorn, A. E., and Travatex Products Corp., decoratively coloured [plastic magnesia] articles, (P.), B., 41.

Cleghorn, R. A., Cleghorn, S. M. M., Forster, M. G., and McVicar, G. A., survival of rats after adrenalectomy and suitability of the young rat for testing adrenal cortex extracts, A., III, 149.

See also Jendrassik, L.

Cleghorn, S. M. M. See Cleghorn, R. A. Cleland, R. R., and Scott, G. S., uso of anthracite in sewage-sludge beds, B., 191.

Clemens, E. C., construction and operation of a simple pyrometer system, B., 1142. Clemens, M. L. See Buehler, C. A. Clement, F. See Terenin, A.

Clément, H., and Savard, J., magnesium pentamethylphenyl halides, A., II, 331. Clément, L., and Rivière, C., preparation of cellulose acetates, A., II, 278.

Clement, W. J., and Bossert Co., hammer mill with equalised [air-]separating means, (P.), B., 1146.
Clemente, D. D. See Fronda, F. M.

Clementi, A., hepatic arginase: relationship to production of urea during autolysis of liver of vertebrates, A., III, 481.

Clements, H. F., drought-resistance of the soya bean, A., III, 407. Droughtresistance of sunflower and potato, A., III, 442.

Clements, L. P., hydro-agitator for solutions, A., I, 636.

Clements, R. G. H., particle shape and surface characteristics of aggregates, B.,

Clemmer, J. B., and Cooke, S. R. B., flotation of Vermont tale-magnesite ores, B., 33. Flotation of complex molybdenum-vanadium ores from Mammoth Arizona, B., 1063.

See also Cooke, S. R. B., and Dean, R. S. Clemo, G. R., alkaline degradation of

strychnine, A., II, 38.

and Dickenson, H. G., action of selenium on compounds containing quaternary carbon atoms, A., II, 142.

and McIlwain, H, phenazine series. IV. Octa- and per-hydrophenazines, A., II, 35.

and Metcalfe, T. P., dicyclo[1:2:2]aza-1heptane, A., II, 466. Syntheses in the octahydropyrrocoline and octahydropyridocoline series, A., II, 467.

Morgan, W. M., and Raper, R., lupin alkaloids, XII. Synthesis of dl-lupinine and dl-isolupinine, A., II, 355.

Clepaz, E., action of iodine trichloride on acctanilide, A., II, 56.

Clere, A., Paris, R., and Macrez, C., effect of morphine hydrochloride and phenylpropionate on diuresis and volume of the kidney, A., III, 179.
Clerf, F., blast-furnace practice in France,
B., 1211.

Clerget, P., machine for classifying liquid fuels according to their ignition advance under conditions of use in compressionignition engines, B., 751.

Cless, F. See Matnschka, B. Cleveland, F. F., and Murray, M. J., Raman spectra of di-n-butyl ether and ethyl adipate, A., I, 549. Cleveland, T. K., and Philadelphia Quartz

Co., cleansing preparation, (P.), B., 1368.

Stericker, W., and Philadelphia Quartz Co., adhesive and method of bonding, (P.), B., 704.

Cleveland Club, organic coatings on pigments in relation to flotation. V., B., 156.

Cleveland Twist Drill Co., alloy steels, (P.), B., 1360.

Clevenger, J. F., resin and volatile oil in cubebs, B., 497.
Clewell, D. H., drying of linsced oil;

electron-diffraction study, B., 938. Clewell, J. H., and Paine, H. W., use of

pigments, lakes, and other colouring matters in plastics, B., 808.

Clewes, A. See King, A. Clews, C. J. B., and Lonsdale, (Mrs.) K., structure of o-diphenylbenzene (C18H14), A., I, 554.

See also Schossberger, F. Clews, F. H., Booth, H., Richardson, H. M., and Green, A. T., jointing cements. V. Behaviour of joints under tension and compression, B., 138.

and Green, A. T., behaviour of silica mixes on being pressed, B., 138. Refractoriness-under-load test. IV. Maintained-temperature test, B., 138. Action of alkalis on refractory materials. V. Action of potassium chloride vapour on refractory materials at 1000°, B., 138. Grading, porosity, and permeability to air of sillimanite bricks, B., 913.

Richardson, H. M., Chadeyron, A., and Green, A. T., action of alkalis on refractory materials. VI. Action of vapour from a potash-silica glass on refractory materials at 1200°, B., 138. Richardson, H. M., and Green, A. T.,

jointing cements. VI. Permeability of some fired cement joints, B., 138. Clibbens, D. A., and Little, A. H., measure-

ment of fluidity (or viscosity) of cotton in cuprammonium solution, B., 124. Clickner, F. H., and Kraft-Phenix Cheese

Corp., egg product and emulsifier therefor. (P.), B., 185. Emulsifier, (P.), B., 185. Casein, (P.), B., 839.
Clifford, A. C. See Western Electric Co.

Clifford, A. M. See Wingfoot Corp. Clifford, I. L. See Imperial Chem. In-

dustries. Clifford, P. A., [determination of] lead, A.,

Clifford, W. M., effect of halogen salts on salivary and pancreatic amylase, A., III

Clifton, C. E., comparison of metabolic activities of Aerobacter aerogenes, Eber-

thella typhi, and Escherichia coli, A., III, 317. Prevention of assimilation in respiring cells, A., III, 486.

Cahen, S. F., and Morrow, G., metabolism of Escherichia coli in synthetic media, A., III, 99. See also Woods, D. D.

Cline, D. C. Sec Sheen, R. T. Cline, J. K., Williams, Robert R., and Finkelstein, $J_{\cdot \cdot}$, crystalline vitamin- B_1 . XVII. Synthesis of vitamin- B_1 , A., 11, 354.

Williams, Robert R., Ruehle, A. E., and Waterman, R. E., crystalline vitamin- B_1 . XVI. Identification of pyrimid-

ine portion, A., II, 212.
See also Major, R. T., and Williams, Robert R.

Clinton, M., jun., and Hubbard, R. S., factors influencing destruction of glucose and fructose by oxygen, A., II, 369.

Cliquet-Pleyel, R., measurement of conductivity and p_n ; application to pure water, A., 1, 551. Clitherow, W. B. See Pilkington Bros.

Clodius, S. See Schemel, R.

Cloke, J. B., Knowles, E. C., and Anderson, Raymond J., ethyl imidocyclopropanecarboxylate[a-imino-a-cyclopropylmethyl ethyl ether] hydrochlorides, A., II, 100.

Clore, W. J., effect of Bordeaux mixture, copper, and calcium sprays on carbon dioxide intake of Delicious apple leaves,

Clorins, O. T., evaporation [water] meter, (P.), B., 511. Closs, K. See Lunde, G.

Clotofski, E. See Friese, H.

Cloudsley, J. L., and Whyte, S., lubricants or fuels for internal-combustion engines, (P.), B., 645.

Cloutier, L., Pelletier, P. E., and Gagnon, P. E., precipitation of carbonates, A., I, 92.

Clow, A., resonance in carbamide and its derivatives. I. Diamagneties, A., I, 222. and Thompson, J. M. C., resonance structures of carbon dioxide, carbonyl sulphide, and carbon disulphide, A., I, 66. Diamagnetism of organic sulphur compounds, A., I, 451.

Clow, A. D. See Webster, L. T. Clowes, G. H. A., and Krahl, M. E., cell metabolism and cell division. I. Relation between structures, properties, and biological activities of nitrophenols, A., III, 64.

See also Krahl, M. E.

Cluff, C. B., chemistry in the development of the cottonseed industry, B., 1233.

Clusius, K., and Frank, A., molecular heat. entropy, and chemical constant of phosphine, A., I, 123. Molecular heat, entropy, and chemical constant of hydrogen sulphide, A., I, 123.

See also Frank, A., Hölemann, P., and

Krnis, A.

Clutterbuck, P. W., Koerber, Walter, and Raistrick, H., biochemistry of microorganisms. LV. Molecular constitution of geodin and erdin, two chlorinecontaining metabolic products of Aspergillus terreus, Thom. I. Constitutional relationship of geodin and erdin, A., II, 385.

Raistrick, H., and Reuter, F., biochemistry of micro-organisms. LIV. Molecular constitution of terrein, a metabolic product of Aspergillus terreus, Thom., A., II, 379.

See also Wills, L.

Clutton, R. F., Harington, C. R., and Mead, T. H., synthetic immunochemistry. I. Synthesis of O-β-glucosidotyrosine and its introduction into the protein molecule, A., II, 267.

Clyburn, T. M., and Kyzer, E. D., effect of phosphorus and calcium on growth and breeding qualities of beef cattle,

A., III, 471.

Coates, C. W. See Weisman, A. I. Coates, F. H., photo-electric spectrophotometer, A., I, 582.

Coates, G. M. See Raydin, I. S. Coates, H., filters for beer and other liquids, (P.), B., 511.

Coates, J. S., geology of Ceylon, A., I, 206. Porosity of Ceylon rocks, A., I, 206. Coates Brothers & Co., Ltd. See Bird,

H.W.Cobb, A. W., and Walton, J. H., reaction

of hydrogen cyanide with sulphuric and phosphoric acids, A., I, 321.

Cobb, J. S., culinary quality in white potatoes, B., 1401.

Cobb, J. W. See Millett, H. C. Cobb, R. M., Lowe, D. V., Pohl, E., and Weiss, IV., [use of] starch [in paper mills], B., 1036.

Coberly, C. J., Wagner, E. M., and RoKo Corp., filtering device, (P.), B., 740.

Cobine, J. D., low-pressure are characteristics, A., I, 486.
Coblentz, W. W., and Stair, R., infra-red

absorption spectrum of deuteriumcontaining stearic acid, A., I, 549.

Coburn, A. F., mechanism of rheumatic fever, A., III, 15.

Coburn, H. H. See Hercules Powder Co. Cockcroft, J. D. See Ellis, C. D.

Cocker, IV., preparation of the simpler a-alkylamino-acids. I. and II., A., II,

Cockerham, K. L., control of sweet potato

weevil, B., 822. Cocking, T. T., importance of $p_{\rm H}$ in volumetric analysis, A., I, 529.

Cochran, G. W. See Haut, I. C. Cochrane, J. D., jun., and Formica Insulation Co., synthetic resin varnish and process, (P.), B., 472.

Cochrane Corporation. See Rohlin, V. A. Cochranes' (Middlesboro') Foundry, Ltd.

See Ridley, IV. Cocioba, I. See Combiesco-Popesco, C.

Cockett, A. H. See Ferguson, A.

Cocking, T. T., glycine, B., 522. Cocosinschi, A. S., electrostatic phenomena in eatalytic oxidation of ethyl alcohol, A., I, 90. Analysis of the powder which fell on 26 April, 1928, A., I, 269. Testing objects for galalith or horn, B., 154.

Codd, A. M., disinfecting and deodorising,

(P.), B., 94. Code, C. F., determination of histamine in blood, A., III, 336.

and Macdonald, Adam D., histamine-like activity of blood, A., III, 451.

Codier, O., and Bennett-Clark Co., sweetening of sour petroleum oil and revivification of the sweetening agent, (P.), B., 873.

Coe, C. S. See Scott, A. F.
Coe, G. D. See Gandrud, B. W.
Coe, H. S., regulation of operations in [wet-grinding] treatment of fluid materials, (P.), B., 631.

Coe, M. R., preservation of rubber, (P.), B., 592. Photochemical studies of rancidity: rate of peroxide development under constant intensity of light, B.,

Coe, IV. S. See Clark, G. L.

Coe Manufacturing Co. See Vance, A. J. Coenen Fils, E. J. B., furnaces for solid fuels, (P.), B., 401.

Coeterier, F., and Teves, M. C., apparatus for transformation of light of long wave-length into light of short wavelength. II. Influence of magnetic fields, A., I, 49.

Coffari, E., chromatographic analysis, A., I., 423. Constitution of celluloso and of wood, B., 124.

Coffelt, O. T. See Du Pont de Nemours &

Co., E. I. Coffey, J. M., and Foley, G. E., medium for demonstration of hydrolysis of sodium hippurate by Streptococci, A., III, 488.

Coffey, S. See Imperial Chem. Industries. Coffin, C. C., and Beazley, W. B., homogeneous first-order gas reactions. VI. Decomposition of methylene diacetate, methylene dipropionate, and methylene dibutyrate, A., I, 416.

Coffin, C. C., Dacey, J. R., and Parlee, N. A. D., homogeneous first-order gas reactions. VII. Decomposition of ethylidene dibutyrate and heptylidene diacetate, A., I, 570.

See also Dacey, J. R., and Parlee, N. A. D.

Coffing, C. See Miller, I.

Cofman-Nicoresti, C. A., preservation of edible fungi, chiefly mushrooms, and increasing their food value, (P.), B., 85. Cogan, D. G., and Cogan, F. C., cataracts

and dinitrophenol, A., III, 256. Cogan, F. C. See Cogan, D. G. Cogan, M. See Gault, H.

Cogal, M. See Gaint, H.
Coggeshall, E. J. See Hooker, A. B.
Coghill, D., citrus by-products, B., 614.
Coghill, R. D., thiazane [tetrahydrothiazine] synthesis, A., II, 309.
Cogno, G., waterproof textile materials, (P.), B., 234.

Cohan, L. H. See Patrick, W. A.

Cohen, A., and Warren, F. L., synthesis of compounds related to the sterols, bile acids, and estrus-producing hormones. XI. A "diene-synthesis" of phenauthrene and hydrophenanthreno derivatives, A., II, 419.

Cohen, Barnett, Schwachman, H., and Perkins, M. E., inactivation of pneumococcal hamolysin by sterols, A., III, 166.

Cohen, Benjamin, mobility data in determining composition of colloidal micelles, A., I, 461.

See also Thomas, A. W.

Cohen, E., and Buij, J. S., supposed allotropy of liquid benzene, A., I, 291. and Lieshout, A. K. W. A. van, influence of mechanical deformation on velocity of transition of polymorphic metals. III. Influence of metallic impurities, A., I, 120. Rate of polymorphic transformations. V. Effect of mechanical deformation on rate of transformation of polymorphic metals. III. Effect of metallic admixtures, A., I, 173. Cohen, H. C., mucilage and carotenoids in

relation to oxidation of linseed oil, B., 257. Cohen, H. T. See Smith, J. H.

Cohen, I. See Viehoever, A. Cohen, J. See Sobel, A. E.

Cohen, J. D., drying of printing inks, B.,

Cohen, K. See Beckmann, C. O.

Cohen, M. V., calculation of precise lattice constants from X-ray photographs, A., I, 116. Elimination of systematic errors

in powder photographs, A., I, 116. Cohen, P. P., ketogenesis, A., III, 306. Cohen, R. A., and Gerard, R. W., hyperthyroidism and brain oxidations, A., III, 493.

Cohen, S. B. See Mellor, D. P.

Cohen, S. L., Marrian, G. F., and Odell, A. D., oestriolglycuronide, A., III, 74. See also Ruzicka, L.

Cohen, S. M. See Murdick, P. P.
Cohen, V. L. See Lyons & Co., J.
Cohen, V. W., and Ellett, A., velocity
analysis by means of the Stern-Gerlach effect, A., I, 592. See also Ellett, A.

Cohen, W. E., and Harris, E. E., pretreatment of wood with hot dilute acid effect on lignin values, B., 766.

Cohen-Solal, G. See Courrier, R. Cohn, A. E., and Steele, J. M., metabolism of the isolated heart of dogs related to age, A., III, 208.

Cohn, B. N. E. See Jones, James Hazlitt. Cohn, E. J., electrochemistry of proteins, A., I, 305.

Green, A. A., and Blanchard, M. H., physical chemistry of proteins. XIV. Amphoteric properties of hamoglobin, A., Î, 240.

McMeekin, T. L., Greenstein, J. P., and Weare, J. H., physical chemistry of amino-acids, peptides, and related substances. VIII. Relation between activity coefficients of peptides and their dipole moments, A., I, 134.

See also Ferry, R. M., and McMeekin, T. L. Cohn, G., electrical conductivity of lepidocrocite, A., I, 382.

Cohn, Samuel, and Samcoe Holding Corp., treatment of fabrics, (P.), B., 1196. Cohn, Sigmund. See Lang, H. M.

Cohoe, W. P., permanent sizing windle alkali-soluble cellulose ethers, B., 773.

Coic. See Vincent.
Coile, T. S., composition of leaf litter of forest trees, B., 1103.

Coker, R. E., and Constable, E. W., apparatus for constant temperature, A., I, 151.

Cola, G., determination of chlorine in silk-rind of cocoons, B., 123.

Colam, E. E. F., ice cream, B., 612.

Colas, A. See L'Alfa. Colas, R. See Perrot, E.

Colbeck, E. W., Craven, S. W., and Murray, W., determination of non-metallic inclusions in steel and iron, B., 47. Heterogencity of steel ingots. IV. Determination of oxygen in steel: chlorine method, B., 1349.

Colbert, J. C., Meigs, W., and Jenkins, R. L., derivatives of hydroxydiphenyls. III. 4-Nitro-3-hydroxydiphenyl, A., II, 336.

Colbeth, I. M., and Baker Castor Oil Co., breaking petroleum emulsions, (P.), B., 1304. Separating petroleum emulsions, (P.), B., 1304.

Colburn, A. P., and Drew, T. B., condensation of mixed vapours, B., 988.

Colby, E. A., and Baker & Co., pertused catalyser, (P.), B., 1144.

Colby, H. S., O'Mara, R. F., and Raymond Bros. Impact Pulveriser Co., system for sludge disposal, (P.), B., 194.

Colclough, T. P., constitution of blastfurnace slags in relation to manufacture of pig iron, B., 42.

See also Brassert & Co., H. A.

Cole, A. C. See Varney, R. N.
Cole, A. G. See Hektoen, L.
Cole, C. L., Donovan, R. L., and Allen,
N. N., sunflower silage for milk production, B., 725.

Cole, \hat{H} . \hat{H} . See Saunders, F, J.

Cole, H. I., and Cardoso, H., hydnocarpic and chaulmoogric acids and ethyl esters, A., II, 320.

Cole, H.N. See Sollmann, T. Cole, J.E. See Du Pont de Nemours & Co., E. I.

Cole, K. S., electric impedance of marine egg membranes, A., III, 387. and Cole, R. H., electric impedance of

marine eggs, A., III, 415. Cole, L. V. See Warne & Co., W.

Cole, L. W. L. See Barkworth, H. Cole, P. J. See Barrett Co. Cole, R. H. See Cole, K. S.

Cole, S. S., and Espenschied, II., lead titanate: crystal structure, temperature of formation, and sp. gr. data, A., I, 288.

Cole, S. S., Scholes, S. R., and Amberg, C. R., sp. gr. and unit cell size of Na₂O,B₂O₃, A., I, 401.
Cole, S. W., [micro-]method for direct

determination of urea in urine, A., III,

Cole, V. V. See Curtis, G. M.

Colebrook, L., Buttle, G. A. H., and O'Meara, R. A. Q., action of p-aminobenzenesulphonamide and prontosil in hæmolytic streptococcal infections, A., III, 72.

Coleman, C. E., and Du Pont Cellophane Co., conditioned material [films], (P.), B., 29.

Coleman, D. A., report of Malt Analysis Standardisation Committee, B., 383. See also King, F. B., Snider, S. R., and Zeleny, L.

Coleman, D. J., jun. See Eastman Kodak

Coleman, G. H., Hermanson, J. L., and Johnson, H. L., [reaction of] monochloroamine with organo-lithium and -zine compounds, A., II, 487.

Holst, W. H., and Maxwell, R. D., reaction of potassamide in liquid ammonia with β-bromo-aa-diarylethylenes, A., II, 11.

See also Dow Chem. Co. Celeman, G. W., and Blanchard, A. A., preparation and properties of cobalt nitrosyl carbonyl and of cobalt carbonyl

hydride, A., I, 43. Coleman, J. D. See Eastman Kodak Co. Coleman, J. E., high standards are main-

tained in heat-treating springs, B., 682. Coleman, R. N., and Prideaux, E. B. R., combination of fatty acids with nitrogen bases. IV. Diethylamine and propionic acid: densities, surface tensions, conductivities, and viscosities of the liquid anhydrous system, A., I, 405.

See also Prideaux, E. B. R.

Coleman, W. C., and McCrosky, C. R., quantitative oxidation of colloidal selenium and its application in volumetric determination of small amounts of sclenium, A., I, 530. Volumetric determination of sclenium, A., I, 579.

Coler, M. A. See Fink, C. G.
Coles, G. H. N., crushing, grinding, and pulverising machines, (P.), B., 1288. Coles, S. B., and Whiddington, R., angular

distribution in the helium double excit-

ation, A., I, 207.

Colin, H., floridoside, a d-monogalactoside of glycerol, A., 11, 369. Artificial production of inulin in Composite, A., III, 106. Theory of alcoholic fermentation, B., 177.

and Belval, H., levosin from wheat, A., III, 332. Chemical similarity and classification of the Hordaces, A., III, 445. Panary fermentation, B., 386. Sugar-cane gum, B., 828. Sugars of "heavenly manna" from the Baghdad Desert, B., 965.

and Lemoyne, S., pectate and araban in the pecto-cellulosic membrane, A., III, 51.

Colin-Russ, A., determination of acidity in leather, B., 1381.

Colla, C. See Ferrari, A.

Collander, R., cation selection by higher plants, A., III, 157. Cell sap of the Characeæ, A., III, 158. Permeability of plant protoplasts to non-electrolytes, A., 111, 407.

Collatz, II., heats of combustion of physiclogically important carbohydrate derivatives, A., I, 83.

See also Neuberg, C.

Collé, removal of iron from water for use in chrome dyeing, B., 896.

Coller, F. A. See Pedersen, S.

Colliard, R. See Loiseleur, J. Collier, S., and Johns-Manville Corp., [fibrous] article of manufacture, (P.), B., 198.

Collier, W. A., and Verhoog, M. J., arsenicdetoxin compounds, A., III, 207.

Colliery Engineering Ltd. See Ridley, F. F. Colligan, F. X. See Texas Co. Collins, A. M. See Du Pont de Nemours

& Co., E. I.

Collins, D. H., synovial fluid in chronic arthritis, A., III, 204.

Collins, E. R., and Rigler, N. E., effect of fertilisers on nitrogenous and other constituents of the cotton plant separated by electrodialysis at different

stages of growth, B., 1387. See also Neal, D. C., and Skinner, J. J. Collins, F. J. E. See Francis, F.

Collins, J. L. See Robinson, P. Collins, J. R., near infra-red absorption band of liquid water at 1.79 μ , A., I, 495.

and Moran, C., influence of certain ions on structural temperature of liquid water, A., I, 548.

Collins, M. A., laboratory work in dairy plants, B., 972.

Collins, R. R., and Lummus Co., contact apparatus, (P.), B., 992.
Collins, S. C., stirring mechanism for pre-

cision thermostats, A., I, 99.

Collins, W. H., Sudbury nickel irruptive. III. Environment, A., I, 101. Collins & Aikman Corporation. See Hiers.

G. S.

Collip, J. B., Thomson, D. L., and Toby, G., effect of adrenaline on muscle-glycogen in adrenalectomised, thyroidectomised, and hypophysectomised rats, A., III, 359.

Colman, I. S. See Tartar, H. V. Colman, M. N., carbon dioxide from lime-

stone, (P.), B., 668.

Colmant, G., conversion of bituminous substances or of bitumen and filler mixtures into protective coatings by spray-

ing, (P.), B., 41.

Colmar, R. I. See Texas Co.

Colmes, A. See Dameshek, W.

Colombati, S., Donaggio's reaction in inoculation vaccines, A., III, 170. Colombier, L., corrosion of metals and phenomena of passivity, B., 794.

Colombo, G., physico-chemical effects of action of light on [weighted] silk, B.,

and Baroni, G., comparison of raw silk with the scriplan and the scrimeter. I. and II., B., 123.

Colonna, M., derivatives of 3-nitro-4hydroxyquinoline, A., II, 261.

Colorado Fuel & Iron Corporation. Stuart, K. B.

Coltof, W., acctate silk, B., 891. Solubility properties of certain highly polymeric

substances, B., 1369. Colton, H. S., the inert gases, B., 1200. See also Grasselli Chom. Co.

Columbia Naval Stores Co. of Delaware, improvement of rosin, (P.), B., 262. Columbia Ribbon & Carbon Manufacturing

Co. See Moore, R. S.

Columbian Rope Co. See Koon, A. W. Columbus, A., feeding of sweet lupins to rats during four generations, B., 617. See also Mangold, E.

Colvez. See Piveteau. Colwell, A. R. See Jacobs, H. R. Colwell, A. T., nitricastiron cylinder sleeves, B., 679.

Colwell, C. A., purified bacteriophage from lysogenic cultures, A., III, 318. Inactivation of bacteriophage by ethyl alcohol, A., III, 435.

Comay, S., free sulphur in petroleum distillates; determination of free sulphur, B., 107.

See also Universal Oil Products Co. Combe, A. C., and Johnson, W. H., brick roofs for furnaces, etc., (P.), B., 39.

Combes, R., carbohydrate nutrition of the corolla (of Lilium croceum), A., III, 106. Combette, R. See Roche, J.

Combiesco-Popesco, C., and Cocioba, I., fermentative properties of Vibrio choleræ, A., III, 99.

Combs, W. B. Sec Coolter, S. T.

Combustion Engineering Co., Inc., welding, (P.), B., 935.

Combustion Utilities Corporation. Johnson, A.

Comes, O. C., influence of acidic and alkaline diets on growing rats, A., III, 17. Nutritive values of fish and beef, B., 974.

Comey, P. V. A., and Comey Brooklyn Co., R. H., continuous bleaching [of fabrics], (P.), B., 432.

Comey Brooklyn Co., Inc., R. H. Seo

Comey, P. V. A.Commercial Filters Corporation. See Gold-

man, M. A. Commercial Solvents Corporation, butyl alcohol fermentation process, (P.), B., 720. Fermentation of beet molasses, (P.), B., 720. Production of butyl alcohol and other products by fer-mentation, (P.), B., 831. Controlling $p_{\rm H}$ of fermentation mashes, (P.), B., 831.

See also Bannister, W. J., and Swallen, L. C.

Commission des Poudres de Guerre de Versailles, calorimetrie determination of nitrogen in nitrocotton and nitroglycerin-nitrocotton paste, B., 1280. Common, R. H. See Kerr, W. R. Commons, C. H., jun. See Kinzie, C. J.

Compagnie de Bethune, apparatus for hydrogenation of carbonaceous materials, (P.), B., 754.

Comp. Française ponr l'Exploitation des Procédés Thomson-Houston, protection of [liquid] halogenous dielectrics from deterioration, (P.), B., 1230.

Comp. des Freins Westinghouse. See Westinghouse Brake & Signal Co.

Comp. Générale d'Electricité, electric [prim-

ary] batteries, (P.), B., 362. Comp. Industrielle & Minière du Nord & des Alps, plant for manufacture of tarry, bituminous, and analogous emulsions, (P.), B., 209.

Comp. Internationale de Produits Ignifuges & Calorifuges. See Van Rolleghem, R. Comp. Lorraine de Charbons pour l'Electricité, positive carbons for intensive arcs with the Beck effect, (P.), B., 55.

Comp. des Métanx d'Overpelt-Lommel & de Corphalie, purification of metallic cadmium, (P.), B., 691. Covering zinc sheets or objects with lead or with a lead-containing alloy, (P.), B., 1071.

Comp. Mines de Bruay. See Soulary, P. Comp. Nationale de Matières Colorantes & Manufactures de Produits Chimiques du Nord Réunies Établissements Kuhlmann, diazoamino-compounds, (P.), B., 216. [Azo-]dyes for esters of cellulose [acetate silk] and products resulting therefrom, (P.), B., 223. Acid azo-dyes, in particular for dyeing and printing of animal textile fibres, (P.), B., 882. Azo-dyes on the fibre, (P.), B., 899.

Comp. de Produits Chimiques & Electrométallurgiques Alais, Froges & Camargue, gold alloys containing beryllium, (P.), B., 251. Electrolytic preparation of alloys of alkaline-earth metals [calcium-lead alloys], (P.), B., 253. 1:1:2-[aaβ-]Trichloroethane, (P.), B., 325.

See also Torchet, P. J. M. Comp. Réunies des Glaces & Verres Spéciaux du Nord de la France, device for stopping melted glass at outlet of a tank furnace, and installations provided therewith, (P.), B., 783.

Compania Salitrera Anglo Chilena. See Freed, E. F.

Compston, H. A., non-soap detergents, B., 1079.

Comptoir de l'Industrie Cotonnière, stiffening linings, (P.), B., 663.

Comptoir des Textiles Artificiels. See Vautier, L. P. G.

Compton, A. H., scattering of X-rays by a spinning electron, A., I, 55. Cosmic rays as electrical particles, A., I,

Compton, C. C., control of gladiolus thrips

(Taeniothrips gladioli), B., 1390.
Compton, J., and Hibbert, H., lignin and related compounds. XXVII. Methylation and structure of methanol-lignin (spruce), A., II, 296.

See also Levene, P. A. Compton, K. T., the electron: its intellectual and social significance, A., I, 159. See also Lamar, E. S.

Comrie, A. See Lauder, A. Comstock, C. S., and Dodge, R. F., rate of carbon dioxide absorption by carbonate solutions in a packed tower, B., 907.

Comstock, G. C., photo-electric investigation of the Allison magneto-optic

effect, A., I, 347. Comstock, G. F., copper castings alloyed with beryllium and titanium; hardness and conductivity after heat treatment, B., 569. Improvement of pearlitic manganese steel by titanium, B., 792. and Bannor, R. E., hardness and

[clectrical] conductivity of heattreated copper castings alloyed with zirconium and beryllium, B., 795.

and Clark, C. L., effect of titanium on properties of 17.5% chromium steel, B., 563.

and Titanium Alloy Manuig. Co., ferrocarbon-titanium alloy, (P.), B., 580.

Comstock, G. J., and Firth-Sterling Steel Co., hard cemented carbide material,

(P.), B., 581.

Comtesse, M. See Goldstein, H.

Conant, L. B., vulcanising rubber to leather, (P.), B., 266.

Conard, C. R., carbon dioxide "generator,"

A., I, 202.

Conard, W. R., deterioration of [water-] pipe and its prevention, B., 505. Conchon, M. J. See Reve, J. M.

Concordia Elektrizitäts Akt.-Ges., apparatus for producing foam, particularly for fire extinguishing, (P.), B., 743.

Condo, F. E., Hinkel, E. T., Fassero, A., and Shriner, R. L., identification of nitriles. II. Additive compounds of nitriles with thiolacetic acid, A., II, 139. Condon, E. U., Altar, W., and Eyring, H.,

one-electron rotatory power, A., I, 601. See also Barnes, R. B., Bleakney, W.,

Breit, G., and Cassen, B. Condrea, P., Poenaru, H., and Dima, G., antitetanus antibodies in normal horse serum, A., III, 338.

Conducteur Electrique Blindé Incombustible, electric cables or other insulated con-

ductors having mineral powder insulation, (P.), B., 150, 361.

Cone, E. F., insulation of open-hearth [steel] furnaces, B., 42. Oxygen-free high-conductivity copper, B., 568.

Cone, J. F. See Burkey, L. A. Cone, R. M., and Davis, L. H., determin-

ation of moisture content of tobacco, B., 840.

Cone, W. H., and Tartar, H. V., passivity of iron in chromic acid solutions, A., I, 365.

Congoleum-Nairn, Inc., protective coating compositions, (P.), B., 159.

Bonney, R. D., and Egge, W. S., treatment of drying or semi-drying oils such as linseed oil to obtain resin-like products, (P.), B., 1090.

See also Bonney, R. D.

Conklin, F. R. See Eastman Kodak Co. Conley, J. E. See Davidson, J. M. Conn, H. J., detection of nitrate reduction

[by bacteria], A., III, 227. Standardisation of tablets for determining methylene-blue reduction in milk, B., 1122.

Conn, J. W., and Newburgh, L. H., hyperglycomia due to impaired hepatic glycogenesis, A., III, 301.
Conn, R. C., and Asnis, R. E., oat flour

as an antioxidant, B., 1119. See also Renshaw, R. R.

Conn, W. C. See McRae, J. A. Conn, W. T., preservative and marinegrowth-arresting processes, (P.), B.,

Connell, H. C., obtaining therapeutically

active substances, (P.), B., 1273.
Connelly, D. S., and Lord, J. O., microscopical studies of [enamel] re-boiling phenomena, B., 240.

Conner, H. A., Peterson, W. H., and Riker, A. J., nitrogen metabolism of crown gall and hairy root bacteria, A., III, 316.

Conner, H. W., effect of light on solanine synthesis in potato tubers, A., III, 235. Conner, S. D. Sec Cook, H. L.

Connerade, E., 4:4'-dibenzyltriphenylmethanc and its derivatives as free radicals, A., II, 11. Radical containing three triphenylmethyl groups, A., II, 332.

Connolly, G. C., Wurzbacher, A. F., and Davison Chem. Corp., apparatus for fractionally distilling oils, (P.), B., 414.
Connolly, J. M., and Dyson, G. M., constitution and reactions of thiocarbonyl

tetrachloride. III. Reaction with primary alkylamines and phenols, A., II, 274.

Conover, C., and Monsanto Chem. Co., purification of phthalic anhydride, (P.), B., 761.

Conquest, V. See Ralston, A. W.

Conrad, F. H., and Beuschlein, W. L., solubility of sulphur dioxide in calcium hydrogen sulphite solutions, A., I, 509.

Conrad, H. See Baumann, Hans. Conrad, K. F. See Nat. Aniline & Chem.

Conrad, R. See Schäfer, K.
Conrad, R. M., and Berg, C. P., optical inversion of d-histidine in the animal body, A., III, 91. Growth on histidine and lysine administered by subcutaneous or intraperitoncal injection, A., III, 467.

Conrad, U. See Hartmann, H.

Conrad-Billroth, H., Kohlrausch, K. W. F. and Reitz, A. W., Raman effect. LXX. Crystal powder method, A., I, 345.

Conrady, (Miss) H. G. See Kingslake,

Consistometer Corporation. See Stephens, E, S.

Consolazio, W. V. See Dill, D. B., and Talbott, J. H.

Consolidated Mining & Smelting Co. of Canada, Ltd., roasting of mineral sulphides in gaseous suspension, (P.), B., 456.

See also Lee, F. E.

Consolidated Paper Corporation, Ltd. See Hambly, J. A.

Consolidated Water Power & Paper Co.

See Massey, P. J.
Consolidirte Alkaliwerke, caustic alkalis, (P.), B., 666.

and Schaechterle, P., protection of wood and other substances from termites and other pests and preparations therefor, (P.), B., 677.

Consortium für Elektrochemische Industrie Ges.m.b.H., acetic anhydride, (P.), B., 1021. Polymerisation of trichloroethyl-

ene, (P.), B., 1310.

Constable, E. W. See Coker, R. E.

Constantinesoo, D. See Solacolu, T.

Construction Products Corporation. See

Witty, G.

Contact Filtration Co. See Moorman,

Container Corporation of America, Fawkes. C. E., and Mackenzie, C. M., coating of paper, (P.), B., 130.

Contardi, A., and Erighian, S., electrical apparatus for semi-micro-determination of nitrogen, A., I, 152.

and Ravazzoni, C., biochemical detection of fluorine poisoning of plants, A., III,

Ravazzoni, C., and Osella, L., phosphatases and phosphateses of milk, A., III, 483.

Conte-Marotta, R. See Cedrangolo, F. Continental Can Co., Inc., method of and apparatus for coating articles [e.g., shaped can ends], (P.), B., 814. See also Madenwald, F. A., and Robinson,

Continental-Diamond Fibre Co. See Landt, G. E.

Continental Distilling Corporation. See Willkie, $H.\ F.$

Continental Oil Co., manufacture and application [as lubricants] of halogenated stearic esters, (P.), B., 326. Formation of esters, (P.), B., 759.

See also Davis, L. L., Lincoln, B. H.,
Melberg, C. O., and Miller, W.
Contini, Z. See Sborgi, U.
Contractor, G. P. See Kalapesi, A. S.
Contract L. See Span M.

Contzen, J. See Popp, M. Conway, E. A. See Kharasch, M. S.

Conway, E. J., and Cooke, R., ammonia formation in shed blood and a characteristic deaminase of the blood stream, A., III, 196.

and Cruess-Callaghan, G., magnesium and chloride "permeation" in muscle, A.,

III, 263.

Conway, M. J., apparatus for making openhearth steel, (P.), B., 53. Open-hearth furnaces for manufacture of steel, (P.),

Conway, V. M., autecology of Cladium mariscus. II. Environmental conditions at Wicken Fen, with special reference to soil temperatures and soil atmosphere, B., 601.

Conway, W.J., synthesis of p-bromophenylmercapturic acid in the fasting rabbit, A., III, 468.

Conybeare, J. G. G., resistance of palladium and palladium-gold alloys, A., I, 121.

Conzelman, J. H., and Alabama Asphaltic Limestone Co., paving composition, (P.),

Conzetti, A., and Geigy Akt.-Ges., J. R., water-insoluble indulines, (P.), B., 653, 1318.

Cook, A. C. See Hein, M. A.

Cook, A. H., and Linstead, R. P., phthalocyanins. XI. Preparation of octaphenylporphyrazines from diphenylmaleinitrile, A., II, 352. See also Kuhn, R.

Cook, C. A., Clarke, M. F., and Light, A. E., biological assays for flavin and dermatitis factors, A., III, 325.

Cook, D. E., and Turner, E. E., racemisation of d-o-(2-dimethylaminophenyl)phenyltrimethylammonium salts, A., IÍ, 97. 2:2'-Derivatives of diphenyl, A., II, 101.

Cook, D. H., variable-voltage auto-transformer, A., I, 379.

and Axtmayer, J. H., determining the gelatinisation temperature of starches; photo-electric method, B., 828.

Cook, E., foundry applications of radio-graphy, B., 801. Basic open-hearth slag control [in steel production], B., 1211. and Bethlehem Steel Co., basic open-hearth steel process, (P.), B., 1224.

Cook, E. S., and Rider, T. H., purification of piperidine and its physiological significance, A., II, 466. Stability of diothane solutions. III., B., 728.

See also Rider, T. H. Cook, E. W., and Major, R. T., preparation of aldehydo-sugar acetates, A., II, 51. See also Major, R. T.

Cook, G. M. See Mitchell, H. S.

Cook, H. L., and Conner, S. D., basicity of dolomite, rock phosphate, and other materials in preparing non-acid-forming fertilisers, B., 1249.

Cook, H. T., and Callenbach, J. A., spinach seed treatment, B., 599.

Cook, J. W., chemical factors in actiology of cancer, A., III, 255.

and Lawrence, C. A., synthesis of polyterpenoid compounds. III., A., II, 292.

Robinson, A. M., and Goulden, F., polycyclic aromatic hydrocarbons. XV. New homologues of 1:2-benzanthracene, A., II, 184.

See also Bachmann, W. E., and Burrows, H.

Cook, M., directional properties in rolled brass strip, B., 353. Copper and copper alloys, B., 794. See also Imperial Chem. Industries.

Cook, M. A. See Harned, H. S. Cook, O. F., rubber production from Castilla and Hevea, B., 814.

Cook, R. P., fat feeding and cholesterol absorption, A., III, 173.

See also Needham, J.

Cook, S. F., and Scott, K. G., bioassay of protein supplements fed to chicks, A., 111, 61.

Scott, K. G., and Abelson, P., deposition of radio-phosphorus in tissues of grow-

ing chicks, A., III, 423. See also Scott, K. G.

Cook, T. J. See Ravdin, I. S. Cook, W. H., chemical weed killers. I.

Relative toxicity of various chemicals to four annual weeds. II. Factors affecting determinations of toxicity of leaf sprays, B., 1105, 1388. and Halferdahl, A. C., chemical weed

killers, B., 1388.
Cook, W. J. See Négresco, T.
Cook Paint & Varnish Co. See Heck, A.
Cooke, C. W., geology of the Coastal Plain
of S. Carolina, A., I, 482.

Cooke, F. C., copra. III. Large copra kilns, B., 602.

Cooke, H. B., and Gray Processes Corp., removing gum-forming constituents from fuel gas, (P.), B., 1010.

Cooke, M. B., pyrolytic decomposition of

hydrocarbons, (P.), B., 521.

See also Petty, E.

Cooke, R. See Conway, E. J. Cooke, S. R. B., short-column hydraulic clutriator for sub-sieve sizes, B., 987. See also Clemmer, J. B., and Dean, R. S.

Cooke, W. T., variation of internal friction and elastic constants with magnetisation

in iron. I., A., I, 120. Cooksey, D. See Lawrence, E. O. Cookson, J. IV. See Osterberg, H.

Cooley, L. M., wild bramble eradication, B., 171.

Cooley, R. E., jun., whiteware research. I. Production of a light yellow-green body stain for a cone 102 vitreous body, B., 1050.

Cooley, T. B., Penberthy, G. C., Armstrong, L., Hunscher, H. A., Cope, F., and Macy, I. G., mineral metabolism in a case of osteopsathyrosis and one of ununited

fracture, A., III, 15.
Coolidge, A. S., and James, H. M., convergence of the Hylleraas variational

method, A., I. 391. Sco also James, H. M.

Coolter, S. T., and Combs, W. B., body and texture of butter, B., 833. Coomber, D. I. See Partington, J. R.

Coombs, C. E., and Traxler, R. N., rheological properties of asphalts. IV. Anomalous flow characteristics of airblown asphalts, B., 1003.

See also Traxler, R. N.

Coombs, F.S. See Talbott, J.H. Coombs, H.A. See Goodspeed, G.E. Coombs, H.I., Catlin, C.H., and Reader,

D., treatment of urinary infection: importance of dictary control, A., III, 298. Coon, E. D., vapour density of nitrogen tetroxido over carbon tetrachloride solu-

tions by a colorimetric method, A., I, 616.

Cooney, J. W. See Elden, C. A. Cooney, R. K., and Keating, F. J., pasteur-

isation, (P.), B., 3.

Coop, I. E., dielectric constants of etherchloroform and ether-chlorobenzene mixtures, A., I, 295.

Cooper, B. S., application of spectrographic methods to glass analysis, B., 138.

Cooper, C. See Smith, S. R. N.

Cooper, C. A., and Hand, P. G. T., determination of $p_{\rm H}$ of rennet casein by the quinhydrone electrode, B., 181.

Cooper, D. Le B., and Linton, E. P., preparation of fresh fillets of fish for

smoking, B., 613.

Cooper, E. A., and Preston, J. F., polysaccharide synthesis by "nitrogen-fixing" organisms, A., Ill, 146. Cooper, E. W. C., cause and cure of grainy

edges, curl, and cockles in paper, B.,

Cooper, F. S., and Hutner, S. H., biological effects of slow electrons, A., III, 348 Cooper, G. A., and Cruver Manuig. Co.,

conversion of solid [plastic] articles into tubular structures, (P.), B., 4.
Cooper, H. M. See Ellis, R. W.

Cooper, H. P., relation of lime application to availability of potash in soil, B., 1385.

Moore, W. D., and Wallace, R. W., effect of manganese sulphate on yields of Irish potatoes, B., 1386.

and Paden, W. R., intensity of removal of added cations from soil colloids by electrodialysis, B., 164. Soil acidity, liming, and fertiliser recommendations for various crops, B.,

Rogers, W. B., and Wallace, R. W., potash fertiliser for cotton, B., 1387. Cooper, J. A., and Garner, W. E., formation of dehydration nuclei on crystals of

chrome alum, A., I, 67.
Cooper, (Miss) J. H. See Finnemore, H.
Cooper, J. M. See Imperial Chem. In-

dustries.

Cooper, K. A., and Hughes, E. D., mechanism of substitution at a saturated carbon atom. VIII. Hydrolysis of

tert. butyl halides, A., I, 467. Hughes, E. D., and Ingold, C. K., mechanism of elimination reactions. III. Unimolecular olefine formation from tert.-butyl halides in acid and alkaline aqueous solutions, A., I, 467.

Cooper, L. H. N., relation between lyotropic series and free energies, A., I, 305. Organic phosphorus in sea-water from the English Channel, A., I, 381.

and Daynes, H. A., absorption of water by rubber. I. Measurement, B., 265. Cooper, R. C. See Imperial Chem. In-

dustries. Cooper, S. R., 2:4 dihydroxyacetophenone as a qualitative reagent for ferric iron,

A., I, 477. Cooper, S. S., use of sodium hypochlorite [in quantitative analysis], A., I, 374. Cooper, W. C., transport of root-forming

hormone in woody cuttings, A., III, 241. Cooper Corporation, P. See Hubbard, J. R. Co-operative Wholesale Society, Ltd., and Sibbald, A. J., cooling and drying of granular and similar solid materials, (P.),

Cooperman, N., calcium and protein changes in serum during sleep and rest without sleep, A., III, 165.

Cope, C. L., alkali poisoning in treatment of gastric ulcer, A., III, 59. Reliability of clearance tests for renal efficiency, A., III, 172. Base changes in the alkalosis produced by treatment of gastric ulcer with alkalis, A., III, 207.

Cope, F. See Cooley, T. B. Cope, F. T., and Electric Furnace Co., testing of gas [for use in heat-treating metal], (P.), B., 1159.

Cope, O., relation of pituitary to liverglycogen production and utilisation, A., III, 360.

and Thompson, R. H., adrenaline and blood-lactic acid level in hypophysectomised rabbits, A., III, 360.

Copeland, J. B., and Aquamellis Eng. Co.,

water softeners, (P.), B., 512.
Copeland, L. E. See Magraw, D. A.
Copeland, O. C. See Fraps, G. S.

Copeland, W. J. A., instruments for automatic control for temperature, pressure, and flow in chemical industry, B., 399.

Copello, F. See Bartolini, B., and Martini, E.

Copeman, P. R. v. d. R., and Dillman, F. J., changes in composition of guano during storage, B., 596.

Copenhaver, J. E. Sce Dickinson, G. M. Coper, K., and Freundlich, H., formation of tactoids in iron oxide sols, A., I, 132.

Copisarow, M., chemistry of influenza and other viruses, A., III, 318.

Copley, M. J., and Deitz, V., torsion manometer for the measurement of the force of a molecular ray, A., I, 583. Copperweld Steel Co. See Antisell, F. L.,

and Williams, S. D.

Copping, A. M., and Roscoe, M. H., water-soluble B-vitamins in yeast, flour, and bread, B., 1395.

Coppock, J. B. See Cumbers, C. F. Coppock, P. D. See Distillers Co. Copson, H. R. See Wesley, W. A.

Copson, R. L., Newton, R. H., and Lindsay, J. D., initial reaction rate between phosphate rock and phosphoric acid, B., 540.

See also Curtis, H. A. Copuzeanu, I. See Maxim, N.

Corazza, M., organic phosphorus compounds. I. Lecithin and phosphorus metabolism, A., III, 18.

and Cervellati, L., organic phosphorus compounds. II. Effect of tritetraethylammonium phosphate (edeine) on phosphorus metabolism, A., III, 93.

Corbellini, A., anthanthrone dyes, B., 422. See also Rondoni, P.

Corbet, R. E. Sco Holmes, H. N. Corbett, W., improvement of glasshouse soils, B., 477.

Corbett, W. J., processing ice-cream mix. B., 1261.

Corcoran, A. C., and Rabinovitsch, I. M., blood-lipins and -protein in Canadian Eastern Arctic Eskimos, A., III, 164. See also Rabinovitsch, L. M. Corda, P. See Laporte, M.

Cordes, F. C., and Harrington, D. O. toxic amblyopia due to tobacco and alcohol, A., III, 11.

Cordes, H., term scheme of the diatomic selenium molecule, A., I, 208. New absorption spectrum of diatomic sulphur, A., I, 271.

Cordill, S. C. See Eaton, A. G. Cordonnier, R., application of Verdet's law to solutions; magnetic rotatory power of ions, A., I, 513.

Cordroc'h, M., new species of yeast of the genus Zygosaccharomyces: Z. Ashbyii, Ă., III, 395.

Cordua, R. See Schneider, Wilhelm. Corell, M. See Vollmann, H.

Corey, A.J., Calhoun, J.M., and Maass, O., pretreatment of wood in aqueous solutions, B., 766.

Corey, E. L., and Britton, S. W., carbohydrate metabolism of hypophysectomised and hypophyso-adrenalectomised rats, A., III, 401.

Corey, R. B. See Wyckoff, R. W. G.

Corey, W. See Klosky, S.

Corhart Refractories Co., and Thompson, F. S., glass-tank furnace and putting

into use the same, (P.), B., 1054.

See also Schroeder, F. W.

Cori, C. F., Cori, G. T., and Hegnauer,
A. H., resynthesis of muscle-glycogen from hexose monophosphate, A., III,

See also Cori, G. T., and Meyer, H. S. Cori, G. T., and Cori, C. F., formation of hexose phosphate esters in frog muscle, A., III, 19. Esterification in muscle, A., III, 23. Acid-soluble phosphates of muscle following injection of glucose plus insulin, A., III, 261. Formation of glucose-l-phosphoric acid in muscle extract, A., III, 306.

See also Cori, C. F.Coriselli, C. See Cambi, L.

Cork, J. M., and Thornton, R. L., disintegration of cadmium with deuterons, A., I, 277.

See also Lawson, L. J., and Pool, M. L. Corl, C. S. See Evans, L. E.

Corler. See Ginieis.

Corlette, M. Sce Youmans, J. B.
Corlette, M. B. Sce Youmans, J. B.
Corlew, R. P. See Barth, E. J.
Corley, R. C. Sce Leighty, J. A.
Cormack, R. G. H. See Brown, A. B.

Cornblect, T., and Pace, E. R., use of maize oil (unsaturated acids) in treatment of eczema, A., 11I, 171.

Cornea, (Mme.) J. M. See Dănăilă, N. Cornelius, A. E. A. S., alkali-metal salts, (P.), B., 907.

Cornelius, H., and Bollenrath, F., fractures in stellite-coated valve-seatings and mean coefficients of thermal expansion of two stellites, B., 567.

Osswald, E., and Bollenrath, F., agehardening of cobalt-tungsten-iron alloys, B., 795.

Cornell, E. S., jun., air-conditioning thermal systems, (P.), B., 298.
Cornell, G. W., determination of carbon

dioxide, A., I, 45.

Cornell, M., Curtis, C. C., and Broadwater, C. C., [used] lubricating oil testing apparatus, (P.), B., 18.

Cornell, S. D., pressure effect in bands of several dipole molecules, A., I, 343. Cornett, W. F. See Seyer, W. F.

Corneu, E., action at a distance of metals on some species of fungi, A., III, 181.

Cornille, A., testing chemical resistance of glasses, B., 1338.

Cornillot, A., representing [electromagnetic moments and mesomerism in] organic compounds, A., II, 223. Mesomerism. I. How does the conception of mesomeric structure arise? II. Attempt to represent in a conventional way electronic linkings and unions between linkings, A., Π , 315.

Cornillot, M. See Lambret, O.

Corning Glass Works, glasses resistant to alkali-metal vapours, (P.), B., 139. Silica for glass batches, (P.), B., 551. and Hood, H. P., [opal glass envelopes for]

luminous discharge lamps, (P.), B., 139.

Corning Glass Works, and Phillips, Charles J., strengthening of glass, (P.), B., 139.

Sec also Badger, A. E., Bowen, C. A., Hood, H. P., Hyde, J. F., Shaver, W. W., and Taylor, W. C.

Cornish, E. A. See Ballard, L. A. T.

Cornog, J., modification of the Bettendorf test as a confirmatory test for arsenic in

qualitative analysis, A., I, 325. Cornthwaite, C. R., and Scoffeld, F., dirt retention or cleanliness of outside white paints after exposure, B., 1087. See also Gardner, H. A., and Hart, L. P.

Cornthwaite, W. R., creatinine derivatives. III. Alkylation with methyl and ethyl sulphates; structure of methylcreatin-

ine, A., II, 468.
Corradini, C. See Casaburi, V.
Corran, T. W., preservatives in foods, B.,

Correa, L. M. Sec Roffo, A. H.

Correns, C. W., and Mehmel, M., optical and X-ray investigation of kaolinite, halloysite, and montmorillonite, A., I, 17. Corriez, P., surface tension and structure of

molecules; the parachor, A., I, 602. Corsaro, J. F., creatine content of human voluntary muscle, A., III, 168.

Corsini, E., and Indovina, R., fruit of Sterculia durida, F. Muell., A., III, 410. Corson, B. B., and Ipatiev, V. N., influence of cyclohexene concentration in alkylation of benzene by cyclohexene; dealkylation of cyclohexylbenzenes, A., II, 236.

See also Ipatiev, V. N. Corson, H. P. See Grasselli Chem. Co. Corson, M. G., aluminium bronzes and their heat treatment, B., 246.

See also Gen. Electric Co. Corson, S. A. See Jacobs, M. H.

Corteggiani, E., free and combined acetylcholine in the brain, A., III, 198. Effect of eserine on stability of the complex present in the brain liberating acetylcholine on heating, A., III, 390. Presence of a complex liberating acetylcholine on heating in various organs of vertebrates, A., III, 390.

Carayon-Gentil, A., Gautrelet, J., and Kaswin, A., reconstitution in vitro of the complex liberating acetylcholine

in the brain, A., III, 390.

Gautrelet, J., Kaswin, A., and Mentzer, C., liberation of acetylcholine from a complex in the nervous centres by heat, A., III, 8.

See also Gautrelet, J., and Mentzer, C. Cortese, F., and Bashour, J. T., synthesis of conjugated bile acids. III. Sodium taurocholate and taurodeoxycholate, A., II, 342.

Cortis-Jones, B. See Lemberg, R.

Corwin, A. H., and Andrews, J. S., pyrrole series. III. Relation of tripyrrylmethane cleavage to methene synthesis, A., II, 522.

Cory, E. L., cardiac activity in the feetal

rat, A., III, 424. Cory, E. N., Harns, H. G., and Anderson, W. H., dusts for control of flies on cattle, B., 714.

Coryell, C. D., Stitt, F., and Pauling, L., magnetic properties and structure of ferrihæmoglobin (methæmoglobin) and its compounds, A., I, 293.

See also Noyes, A. A. Cosbie, A. J. C., effect of temperature of drying on value of hops, B., 277. Nature of simple proteins, B., 609.

Cosciug, T., naphthenic acids of Texas petroleum, B., 516.

Cosler, A. S., [wood] pulp mechanically defibred, B., 226.
Cosslett, V. E., structure and electrical

conductivity of thin films of indium, A.,

Costa, D., and Cannella, C., detection of vegetable flour in wheat flours and pastes. I., B., 78.

and Ravenna, G., detection of leguminous flour in wheat flours and pastes. II., B., 1259.

Costa, G., influence of sympathetic and parasympathomimetic drugs on intestinal absorption of peptone and glycine, A., III, 391.

Costa, O. de A., and Faria, L., the yajé, A., III, 107.

Coste, F., Grigaut, A., and Mande, A., free and combined purines of blood in gout, A., III, 58.

Coste, J. H., and Chaplin, C. A., risks of fire or explosion in operating theatres,

Costeanu, G., and Barchewitz, P., absorption spectrum of ammonia in the very near infra-red (6000-9500 A), A., I, 111.

See also Renaud, P.

Costeanu, N. D., detection and determination of ammonia in waters, A., I, 197. Detection and determination of gold in solutions, A., I, 200. Determination of magnesium in plants, A., III, 441.

Coster, D., Moseley diagram of X-ray term

values, A., I, 386.

Costigan, S. M., effectiveness of hot hypochlorites of low alkalinity in destroying Mycobacterium tuberculosis, A., III, 226.

Yates, J. W. Hadfield, W. A., and McCulloch, E. C., effectiveness of hot hypochlorites of low alkalinity in destroying Mycobacterium tuberculosis, A., III, 359.

Cosyns, M. G. E., specific ionisation by high-speed particles, A., I, 337. Variation of primary specific ionisation of hydrogen as a function of incident electron energy, A., I. 437.

Cotel, E., calculation of coke charge in

blast-furnace operation, B., 678.

Cotoni, L., and Pochon, J., testing of therapeutic sera. II. Testing of sera by neutralisation of the antibody in vitro, A., III, 86.

Cottet, J. See Chabrol, E., and Loeper, M. Cottier, G. J. See King, D. F. Cottin, H. See Paul, R. Cottle, D. L., and Powell, L. S., reaction

of By-oxidobutane with the Grignard

reagent, A., II, 3. Cottman, E. W., [laboratory experiments in chemiluminescence], A., I, 430.

Cotton, F. H. See Gibbons, P. A.

Cotton, F. S., device for oxygen absorption in gas analysis, A., I, 50. Cotton, R. T. See Back, E. A., and Dean,

G. A.

Cottrall, L. G., air-permeability of paper, B., 1189.

Cottrell, C. L. See Bozler, E.

Cottrell, O. P., and Edeleanu Ges.m.b.H., high-octane number gasoline, (P.), B., 17. Cottrell, R., control of pebble and take-up [in crêping rayon fabrics], B., 31.

Cotui, F. W. See Bodo, R. C.
Coubrongh, G. B., and Lummus Co., distillation of oils, (P.), B., 413.

Couch, J. F., lupin studies. XII. Alkaloids of Lupinus laxus, Rydb., A., II, 434. Chemistry of stock-poisoning plants, B.,

Conch, J. R., Frans, G. S., and Sherwood, R. M., vitamin-D requirements of chicken grown in absence of sunlight, B., 83.

See also Sherwood, R. M. Couchet, G. See Cattelain, E. Coufallk, F. See Simek, B. G.

Couillaud, J., determination of antimony in excreta, A., III, 170.

Conll, J. See Manning, J. J.

Coulson, C. A., electronic structure of methane, A., I, 223. Criterion of maximum overlapping of wave functions, A., I, 223. Evaluation of integrals occurring in studies of molecular structure, A., I, 223. See also Lea, D. E.

Coulson, E. A., tar hydrocarbons. I. Reduction products of pyrene, A., II, 408. Coulson, E. J., [determination of] copper [in foods], B., 975.

Coulter, A. C. I., apparatus for straining sugar-cane juice, (P.), B., 276.

Coulthard, A. See Imperial Chem. Indus-

Coulthard, J., filter pad [for milk], (P.), B., 727,

Coumou, D. J. Seo Sizoo, G. J. Counselman, T. B., recovery of blast-furnace flue dust from scrubber water,

Courard, W., improved form of Strache gas calorimeter (explosion calorimeter), λ., I, 634.

Cournot, J., and Baudrand, M., corrosion of [metal] assemblages, B., 354, 1067. and Halm, (Mlle.) L., testing for corrosion of magnesium and of non-pro-

tected ultra-light alloys, B., 925. Corrosion of magnesium and ultra-light alloys protected by surface deposits, B., 1066.

Courrier, R., and Cohen-Solal, G., quantitative study of anti-cestrogenic action of progestin, using crystalline hormones, A., III, 229. Relation between testosterone and folliculin; quantitative study of their antagonism, A., III, 229.

and Gros, G., functional relationship between ovarian hormones of primates, A., III, 362.

Courtaulds, Ltd., and Givens, J. H., artificial filaments, threads, bands, etc., (P.), B., 429.

Givens, J. H., Biddulph, H. W., and Rose, L., artificial threads, filaments, etc., by the viscose process, (P.), B., 1324.

and Lander, J., artificial threads, filaments, etc. [of uniform dyeing properties], (P.), B., 29. and Topham, C. F., staple fibre, (P.), B.,

1038.

Courtine. See Miège, E. Courtines, M., study of the matrix; electric moment, A., I, 493.

Courtois, C., characterisation and differentiation of Ponceau 2R in mixtures of pigments for pastries, etc., B., 832.

Courtois, Jacques. See Lecoq, R. Courtois, Jean, comparative hydrolysis of a- and β -glycerophosphoric acids by vegetable phosphatases. III. Action of arsenates and fluorides on taka-diastase. IV. Effect of enzyme concentration on

the affinity for substrate, A., III, 314.

Courtois, Jean, and Denis, P., action of takadiastase on monophosphoric esters of n- and iso-propyl alcohol, A., III, 269.

Sec also Fleury, P.

Courty, C., micro-magnetic determination of iron and its application to biology, A., I, 199. Diamagnetism of solutions of iodine, A., I, 302. Diamagnetism of iodine solutions and the purity of alcohol, A., I, 459.

Cousen, A., standard test for chemical durability of glass bottles, B., 137. Bursting-pressure test on glass bottles,

B., 546.

Cousin, J. See Le Grand, A. Cousins, R. F. See Molitch, M.

Coutant, J. G., savings with insulating refractories, B., 783. Purification of gases, (P.), B., 1149.
Coutouly, M. See Dédek, J.

Coutts, J., santonin in English and Welsh Artemisias, B., 86.

Coutts, J. R. H., conductivity method for determining soil-water movement, B.,

Covello, M., polyiodides of hexamethyl-aydiaminoisopropyl alcohol di-iodide, A., Relation between properties and methods of preparing tinctures, B., 186.

Cover, S. See Bisbey, B. Covill, R. W., chlorination in sewage

treatment, B., 1413.

Cow & Gate, Ltd., Gates, W. R. B. St. J., and Tavroges, J., drying of milk, milk products, and milk mixtures, (P.), B., 391.

Cowan, B. See Cowan, E. Cowan, C. See Best, C. II.

Cowan, E., theory of drainage in relation to wire section of the paper machine, B., 427.

and Cowan, B., theory of paper drying, B., 127.

Cowan, E. K. See Blodgett, F. M.

Cowan, J. C., and Marvel, C. S., ammonium salts from bromopropylamines. VI. Salts of polymeric tertiary amines, A., II, 8.

Cowan, S. L., resting potentials of muscle and nerve, and depolarisation by various

agencies, A., III, 387. Coward, H. F., and Georgeson, E. H. M., diffusion coefficient of methane and

air, A., I, 506. Hartwell, F.J., and Georgeson, E.H.M., mechanism of flame movement. IV. The vibratory period, A., I, 568.

Coward, H. W. See Nat. Aniline & Chem. Co.

Coward, K. H., accuracy of biological determinations of vitamins, A., III,

Cowdrey, W. A., Hughes, E. D., and Ingold, C. K., reaction kinetics and Walden inversion. III. Homogeneous hydrolysis and alcoholysis of a-bromopropionic acid, its ester and anion. V. Action of silver salts in hydroxylie solvents on a-bromopropionic acid, its methyl ester, and sodium salt, A., II, 363.

Hughes, E. D., Ingold, C. K., Masterman, S., and Scott, A. D., reaction kinetics and Walden inversion. VI. Relation of steric orientation to mechanism in substitutions involving halogen atoms and simple or substituted hydroxyl

groups, A., II, 363.

Cowdry, $E.\ V.$, Lucas, $A.\ M.$, and Neff, $C.\ F.$, resistance of vitamin- B_1 . and -B2 deficient and normal rats to intracerebral injection of herpes virus, A., III. 124.

Cowell, S. J., excretion of calcium by large intestine of the rabbit, A., III, 307. Physiological bases of nutrition, A., III,

Cowgill, G. R. See French, R. B., Horwitt, M. K., and Melnick, D.

Cowgill, W., W., and Sardik, Inc., dry pectin, (P.), B., 617. Cowin, H. W. See Linde Air Products Co.

Cowles, E., and Electric Smelting & Aluminum Co., treatment of liquids [and solids], (P.), B., 1290.

Cowles, P. B., effect of cysteine on tetanus toxin, A., III, 414.

Cowles, R. P. See Brambel, C. E.

Cowles Co., refining paper pulp stock, (P.), B., 1037.

Cowles Engineering Corporation, apparatus for disintegrating, dissolving, a mixing solids in liquids, (P.), B., 305.

Cowley, E. G., and Partington, J. R., dielectric polarisation. XXI. Effect of solvent and temperature on polarisation and apparent moments of bromides, A., I, 115.

Cowper-Coles, S. O., protection of iron and steel surfaces from corrosion, (P.), B.,

Cox, A. B. See Wark, I. W. Cox, C. I. See Hicks, C. S.

Cox, C. R., elimination of tastes and odours from water supplies, B., 298. Cox, E. E., and Industrial Labs., distilled

alcoholic liquors, (P.), B., 487. Cox, E. F., current difference in y-ray ionisation measurements, A., I, 107.

See also Bowen, I. S. Cox, E. G., Goodwin, T. H., and Wagstaff, A. I., structure of isatin. I., A., II,

Shorter, A. J., and Wardlaw, W., stereochemistry of bivalent tin and lead, A., I, 118.

Shorter, A. J., Wardlaw, W., and Way, W. J. R., stereochemistry of quadricovalent atoms: cobalt and manganese, A., I, 553.

and Webster, K. C., stereochemistry of quadricovalent atoms: tervalent gold, A., I, 17.

See also Llewellyn, F.J.

Cox, G. E., and Amer. Cyanamid Co., granulating [calcium cyanamide] fertiliser, (P.), B., 715.

Cox, G. J., Dodds, M. L., and Niacet Chem. Corp., esters of lævulic acid, (P.), B., 118. Calcium levulinate [lævulate], (P.), B., 214.

Ferguson, J. H., and Niacet Chem. Corp., sugar acylation, (P.), B., 277.

Corp., sight adjusted, (1.7), B., 217.

Cox, H. E., mills for mixing, grinding, refining, etc., (P.), B., 4. Mixing machine, (P.), B., 98. Single-roll mills for grinding, refining, etc., (P.), B., 98. Edge-runner mills, (P.), B., 98, 302. Mills and breast bars for grinding, refining cleaning for grinding, and property of the propert refining, cleansing, finishing, etc., (P.), B., 302. [Roller] mills for mixing,

grinding, refining, etc., (P.), B., 302. Cox, H. L., and Sopwith, D. G., effect of orientation on stresses in single crystals and of random orientation on strength of polycrystalline aggregates, A., I, 228.

See also Union Carbide & Carbon Corp.

Cox, H. R. See Bauer, J. H.

Cox. J. A., artificial bricks, slabs, blocks, tiles, etc., (P.), B., 677.

See also Daniel, D. M. Cox, J. T., jun. See Hauser, E. A. Cox, (Miss) Martha. See Michels, W. C.

Cox, Merrill. See Irwin, J. P.

Cox, R. G. See Davies, W. C. Cox, R. T., and Chase, C. T., scattering of electrons by atomic nuclei, A., I, 106.

Cox, S. See Desai, K. Cox, W. M., jun., and Imboden, M., rôle of calcium and phosphorus in reproduction, A., III, 20. Mineral composition of young rats, A., III, 20. Effect of mono-, di-, and tri-calcium phosphates on reproductive success in rats, A., III, 389.

and Mueller, A. J., composition of milk from stock rats: apparatus for milking small laboratory animals, A., III,

 \mathbf{Cox} , W. V., Hawkins, J. W., and Robertson, H. F., determination of basal- and exercise-cardiac output in dogs, A., III,

Crabtree, H. G., ammonia formation in irradiated tissues, A., III, 21.

Crabtree, J. I. See Eastman Kodak Co., Kodak, Ltd., and Vittum, P. W.

Crackston, J. E., modified mercury trap, A., I, 50.

Craft, W. A. See Moe, L. H.
Crafts, A. S. See Ball, W. S.
Cragg, R. W., Power, M. H., and Lindem,
M. C., carcinoma of the islets of Langerhans with hypoglycamia and hyperinsulinism, A., III, 342.

Craig, D., determination of diarylamines in

rubber compositions, B., 591. and Goodrich Co., B. F., antioxidants [for use with rubber, etc.], (P.), B., 878.

Craig, D. N., Vinal, G. W., and Vinal, F. E., solubility of mercurous sulphate in sulphuric acid solutions, A., I, 128.

Craig, F. N., respiratory quotient of seed-lings of Lupinus albus during early stages of germination, A., III, 159. See also Pratt, R.

Craig, L. C., fractional distillation microapparatus, A., I, 583. See also Jacobs, W. A.

Craig, N., biochemistry, B., 476. Phosphate status of Mauritius soils, B., 1098. Craig, O., Riley flue gas scrubber, B., 1143. Craig, R., and Wilson, C., use of buffered solutions in staining: theory and

practice, A., III, 368.

See also Fox, D. L.
Craig, W. A., Griffith, F. E., and McDuffle,
W. C., asphalt coating material, (P.), B.,

Craighead, C. M. See Aluminium, Ltd.

Craik, $J_{\cdot \cdot}$, cellulose ethers: availability and use in time of national emergency, B., 767.

Crain, R. C., bleaching of rag half-stock by calcium hypochlorite, B., 125.

Craise, F. L., and Brown, E. S., oil-refinery hydrogen sulphide as source of sulphuric acid, B., 1004.

Cralley, E. M. See Tullis, E. C.

Cram, H. G., evacuation of condensate, (P.), B., 1144.

Cram, S. W., influence of temperature on fading time of fluorescence of uranin solutions, A., I, 63.

Cram, W. See Roebuck, J. R.

Cramer, F. B., and Pacsn, E., ketone sugar series. VI. Effect of zinc chloride on ketose acetates. VIII. Structure of l-sorbose penta-acetate, A., II, 230, 400. Preparation of penta-acetyl-ketofructose, A., II, 325.

See also Pacsn, E. Cramer, II. I. See Adkins, II., and Wingfoot Corp.

Cramer, P. L., and Campbell, J. M., synthetic decanes as high-antiknock fuels, B., 517.

Cramer, R. E., production of flakes in steel by heating in hydrogen, B., 1351.

Cramer, W., and Horning, E. S., relationship between the male gonads and the adrenal gland [in mice], A., III, 321.

Crampton, D. K., wrought copper-base alloys, B., 575.

and Mitchell, N. W., corrosion-testing methods for copper alloys, B., 922.

Crandall, B. S. See Lambert, E. B.

Crandall, L. A., jun., origin and significance of blood-serum enzymes, A., III, 166. and Roberts, G. M., increased water exchange following Eck fistula in dogs, A., III, 266.

See also Lederer, L. C.

Crane, H. I. See Schumb, W. C.

Crane, H. L., and Dodge, F. N., influence of pruning and applications of ammonium sulphate on the growth, pistillate bloom, and set of nuts on pecan trees, B., 602.

Crane, H. R., is the momentum a sufficient description of a photon or an electron? A., I, 110. High potential apparatus for nuclear disintegration experiments, A., 1, 536. Removal of scratches from photographic film, B., 982.

Delsasso, L. A., Fowler, W. A., and Lauritsen, C. C., short-lived \(\beta\)-radio-

activity, A., I, 161. and Monzon, J. C., cloud chamber, A., I, 582. Light source for cloud chamber illumination, A., I, 582.

See also Bayley, D. S., Gaerttner, E. R., and Turin, J.J.

Crane, M. M., and Sanford, H. N., effect of variations in total calcium concentration on coagulation time of blood, A., III, 373. Crane, P. W., Fields, R. T., and Du Pont

Viscoloid Co., seasoning [extruded cellul-

ose ester plastic, (P.), B., 157.

Crane Packing Co. See Howland, E. G.
Cranfield, H. T. See Blood, J. W.

Cranston, J. A., and Brown, H. F., potential developed by the hydrogen electrode and by the glass electrode in concentrated acid solutions, A., I, 244. Hydrolysis of salts. I. Measurement by the glass electrode. II. KCN, CuSO₄, NaHSO₄, and Pb(NO₃)₂, A., I, 245.

Crasu, V. See Ostrogovich, A.

Crater, W. de C. See Hercules Powder Co. Craven, E. C., and Kershaw, J. M., testing of acetic acid, B., 415.

Craven, S. W. See Colbeck, E. W.

Craver, L. F., and Schlundt, H., parathyroid extract and viosterol treatment of radium poisoning, A., III, 138. Crawford, A. B., and Primrose, J., action

of amines on semicarbazones, A., II, 185. Crawford, B. L., jun., and Cross, P. C., valency angle in hydrogen sulphide, A., I, 343. Elements of the factored secular equation for the semi-rigid water-type rotator, with application to the hydrogen sulphide band at 10,100 A., A., I, 501. See also Parks, G. S. Commence of the

Crawford, C. C. See Harned, H. S. Crawford, D. P. See Henderson, G. H.Crawford, F. W. Sec Nielsen, J. F.

Crawford, James. See Rule, H. G. Crawford, John. See Wren, H.

Crawford, J. T., importance of pulp density, particle size, and feed regulation in flotation of coal, B., 101.

Crawford, J. W. C. See Imperial Chem. Industries.

Crawford, M. F., McLay, A. B., and Crooker, A. M., spectrum of treblyionised lead, Pb Iv, A., I, 272.

Crawford, W. E., cyanide milling practice of the Fresnillo Co., B., 49.

Crawford, W. P., and Johnson, F., turquoise deposits of Courtland, Arizona, A., I, 588.

Crawshaw, H. See Brit. Cclanese. Craxford, S. R., Gatty, O., and McKay, H. A. C., theory of electrocapillarity. IV. Electrophoresis, A., I, 411. Creamer, A. S. See Geller, R. F.

Creamery Package Manufacturing Co., Ltd., Yates, H., and Page, A. E.. pasteurising apparatus for liquids [milk], (P.), B.,

Creanga, H. Seo Magheru, G.

Creighton, H. B. See Avery, G. S., jun. Cremer, A., electrodeposition of metals, (P.), B., 1229.

Cremer, K., action of single intravenous injections of callicrein, A., III, 178.

Crenshaw, J. L. See Sollers, (Miss) E. F. Crepaz, E., system water-sodium theobromine-sodium salicylate, A., I, 243. Reduction of stannic oxide by means of carbon monoxide, A., I, 258.

Crescitelli, F. See Taylor, I. R. Crespi, M., and Caamaño, J. L. G., pyrolysis of chlorates and perchlorates. II., A., I, 373.

Crespin, D., and Desirant, M., empirical formula for the spectroscopic determination of internuclear distances in diatomic molecules, A., I, 348.

Crespinel, W. T., films in natural colour, (P.), B., 294. Colour kinematography, (P.), B., 502.

Cressman, A. W. See Dawsey, L. H. Cretcher, L. H., Butler, C. L., Renfrew, A. G., and Mellon Inst. of Industrial Res., apocupreine and apocupreine derivatives, (P.), B., 394.

Nelson, W. L., Butler, C. L., and Renfrew, $A.\,G.$, cinchona alkaloid derivatives [etahydroxyethylapoquinine], (P.), B., 499.

Nelson, W. L., Butler, C. L., Renfrew, A. G., and Mellon Inst. of Industrial Res., cinchona alkaloid derivative, (P.), B., 394.

See also Butler, C. L., and Souther, B. L. Crews, S. K., detection of rhapontic rhubarb in galenical rhubarb preparations, B., 87.

Criegee, R., intermediate products in dehydrogenations with quinones, A., II, 66. Oxidative fission of the C·C linking, A., II, 132,

and Stanger, H., cis-cyclo-hexanediol from cyclohexene oxide, A., II, 59.

Crimm, P. D., and Short, D. M., vitamin-A deficiency in the dog, A., III, 404.

Crippa, G. B., and Agnzzi, A., phthaloylation; action of quinoxaline-2:3-dicarboxylic anhydride on o-phenylenediamine, A., II, 469.

and Ferrari, R., biological action of an o-aminoazo-derivative of the pyrazole group, A., III, 424.

Crippa, G. B., and Perroncito, G., pyrazopyrazines, A., II, 35.

and Scevola, E., reactivity of benzylacetone in Pfitzinger's reaction, A., II, 305. [Condensation of] 2-aminopyridine [with ethyl acetoacetate], A., 11, 433.

and Verdi, T., pinaflavols, A., II, 31. Crismer, R., photometric determination of ammonia, A., I, 530. Effect of amino-acids on metabolism of various forms of muscular tissue, A., III, 344.

Crist, R. H., and Calhoun, G. M., rate of oxidation of carbon monoxide in presence of nitrogen dioxide, A., I, 34.

See also Calhoun, G. M.

Cristol, P., Hédon, L., Loubatières, A., and Monnier, P., determination of parallel variations in liver-glycogen and -lipin by multiple sampling in the same dog, A., III, 119.

and Monnier, P., non-protein-nitrogen of blood after deproteinisation with trichloroacetic acid, A., III, 83.

Critchett, J. II., corrosion-resistant stainless steels and irons, B., 143.

Crites, B. O., and Gibbs Manufg. Co., deodorising, (P.), B., 1414.

Crites, J. See Internat. Combustion, Ltd. Critz, P. F., and Sligh, H. F., experimental bituminous treatment of sandy-soil roads, B., 786.

Croad, G. F. See Smith, G. Frederick. Croce, G., tests of a boiler plant operating with coke breeze, slack coal, and cokeoven gas, B., 95.

Croekard, F. H., five years of progress in southern blast-furnace practice, B.,

Crocker, A. J. See Bridge, W.

Crocker, E. C., measuring food flavours, B., 1128.

Henderson, L. F., and Little, Inc., A. D., stabilisation of soap, (P.), B., 697. and Platt, W., food flavours-a critical review of current literature, B., 1128.

Crockett, L. O. See McAfee, A. M. Crockford, H. D., and Powell, E. C., jun., solubility studies in the systems: benzene-p-nitrotoluene and benzene-o-nitro-

toluene, A., I, 243. Croco, C. W. See Du Pont de Nemours & Co., E. I.

Crommelin, C. A. See Mathias, E., and Meihuizen, J. J.

Cromwell, B. T., synthesis of hyoscyamino in Atropa belladonna, A., III, 238.

Crone, W., efficiency effect of X-ray Kfluorescence radiation for the elements carbon, nitrogen, oxygen, and neon, A.,

Cronheim, G., influence of radiation, on enzymes and enzymic processes, A., III, 479.

E. M., and Davies, William, thionaphthen-2-acetic acid, A., II, 516. Davies, William, and Smith, (Miss) N. E., synthetic plant growth hormones, A., IĬ, 112.

Crook, J. H. See Hodgson, H. H. Crooker, A. M. Sco Crawford, M. F. Crooks, H. M. Sce Marker, R. E.

Crosby, E. L., and Detroit Electric Furnace Co., slag and agitation heat treatment for metals, (P.), B., 931. Crosby, J. D. See Shreve, R. N.

Crosby, O. E. See Standard Oil Develop-

ment Co. Crosby, R. H., and Carney, B. R., treatment of mineral oil distillates, (P.), B., 114.

Crosby, W. E., Burnett, A. C., and Aluminium Plant & Vessel Co., agitating apparatus, (P.), B., 994.

Crosfield & Sons, Ltd., J. See Furness, R. Crosley, R. W. See Near, H. B. Cross, F. B. See Webster, J. E.

Cross, H. C., and Dahle, F. B., long-time creep tests of 18% chromium, 8% nickel steel, and 0.35% carbon steel, B., 679.

and Krause, D. E., phosphorus as an alloying element in steels for use at elevated temperatures, B., 563.

Cross, L. B. See Henze, H. R. Cross, M. F., dispersal of particles, (P.), B., 632.

See also Cross, R.

Cross, P. C., Q branch and analysis of the hydrogen sulphide band at 10,100 A, A., I, 343.

Burnham, J., and Leighton, P. A. Raman spectrum and the structure of water, A., I, 394.

See also Brockway, L. O., and Crawford, B. L., jun.

Cross, R., and Cross, M. F., aqueous suspension compositions, (P.), B., 635. Cross, R. J., and S. M. A. Corp., recovery of

carotene from soaps, (P.), B., 465. Cross, W. E., composition of [sugar-cane] juices of POJ 36 and 213 grown in the same field, B., 1109.

Crossley, M. L., Shafer, L. M., and Calco Chem. Co., blue, red, and brown metallised acid azo-dyes, (P.), B., 222.

Crossley, T. L., quantitative test for soap-wrap paper, B., 1036.

Crossmon, G., isolation of muscle nuclei, A., III, 199.

Crosson, L. H. See Dickinson, G. M. Crouch, H. W. See Eastman Kodak Co. Crouet, J., unimolecular layers and pigment dispersion without grinding, B., 699.

Croup, A. H., and Goldblatt, L. A., elementary consideration of some nuclear

phenomena, A., I, 438.
Crovisier, C. See Loiseleur, J.
Crowe, M. O'L. See Wadsworth, A., and
Wheeler, M. W.
Crowe, T. B. See Merrill Co., and Mills,

L. D.

Crowell, W. R. See Kirschman, H. D. Crowfoot, D., two crystalline modifications of insulin, A., III, 362.

and Bernal, J. D., X-ray crystallography and chemistry of steroIs and sex hormones, A., I, 118.

Crowley, A. J., mineral behaviour when associated with superheated water, B.,

Crowley, H. G., Riemenschneider, E. W. and Triploil Manufg. Co., reclaiming used lubricating oil, (P.), B., 521.

Crown Cork & Seal Co., Inc., compositions for sealing and gasket purposes, (P.), B., 739,

See also Ayers, S. H.

Crowther, C., feeding of livestock, B., 838.

Crowther, E. M., technique of modern field experiments, B., 821.

and Warren, R. G., fertiliser value of basic slags and other phosphates, B., 166.

See also Stewart, R.

Crowther, F., [report of] plant physiology section, B., 168. Multiple-factor experiments on manuring of cotton in Egypt, B., 1102.

Crowther, J. A., and Liebmann, H., effect of X-radiation on the ζ -potential

of colloidal graphite, A., I, 461. Liebmann, H., and Lane, T. B., effect of X-radiation on colloidal carbon, A., I,

Crowther, R. E. See Kedak, Ltd. Croxton, F. C. See Standard Oil Co. Crozier, R. N. See Blaikie, K. G.

Crude Oil Recovery Co. See Jackson, John Meadows.

Cruess, W. V., tannin [in wines], B., 383. Volatile acid formation in muscat fermentations, season 1936, B., 486.

and Hohl, L., improvement of sweet wines, B., 830.

See also Byrne, J., Celmer, R. F., Fessler, J. H., and Hohl, L.

Cruess-Callaghan, G. See Conway, E. J. Cruickshank, D. B., natural occurrence of zinc in teeth. II. Some general considerations, A., III, 455.

Cruickshank, E. M., effect of different cereals in fattening ration on composition of body-fat of the fowl, B., 617.

and Moore, T., vitamin-A and carotene. XVI. Effect of administration large amounts of vitamin-A vitamin-A content of the hen's egg, A., III, 76.

Cruickshank, E. W. H., and McClure, G. S., utilisation of amino-acids and fat by the mammalian heart, A., III, 129.

Cruickshank, J. C., and Freeman, G. G., immunising fractions isolated from Hæmophilus pertussis, A., III, 373. Cruickshank, Ltd., R., and Major,

clectroplating apparatus, (P.), B., 459. Crundall, S. F. W. See Hancock, A. Cruse, J. E. J., and Rose, C. F. M., deter-

mination of phosphatase in blood containing fluoride, A., III, 222.

Cruse, K., quantitative analysis by emission spectra, A., I, 374.

Crussard. See Gauzelin. Crussard, J., and Leprince-Ringuet, L., passage of cosmic-ray particles through screens, A., I, 163.

Sco also Leprince-Ringuet, L.

Cruver Manufacturing Co. See Cooper, G. A. Cruz, A. O., and West, A. P., Philippine physio-nut oil, B., 940. Philippine tobacco-seed oil, B., 941.

Cryder, D. S., and Finalborgo, A. C., heat transmission from metal surfaces to boiling liquids: effect of temperature of the liquid film coefficient, B., 1284. and Porter. D. J., ethane pyrolysis in the

presence of steam, A., II, 315.

Csáki, L. See Bienenstook, M.
Császár, E., energy measurement of X-rays.
I. and II., A., I, 224.
Csernák, G. See Gróh, J.

Csiky, J. S., classification of agricultural soils on the basis of 'Sigmond's general system. I. and II., B., 1096. Csillag, Z. See Scheff, G.

Csiszar, J. See Vas, K.

Csonka, F. A., amino-acids in staple foods.
I. Wheat (Triticum vulgare). II. Effect of milling wheat on distribution of amino-acids, B., 721, 832.

and Jones, D. B., cystine, tryptophan, and tyrosine content of the soya bean, A., 111, 244.

Csürös, Z. See Zemplén, G. Ctyroký, V., and Fanderlik, M., Czechoslovakian specifications for lead glasses, B., 439. New Czechoslovakian signal glasses, B., 546.

Cubin, T. See Bridge, W.

Cuboni, E., Simon's method for determination of hypercalcamic action of parathyroid hormone, A., III, 279.

Cuckow, F. W. See Preston, J. S. Cudworth, J. R., and Mead, J. C., utilisation of slag in the Birmingham district, Alabama, B., 917.

Culbert, R. W., McCune, D. J., and Weech, A. A., rate of evaporation in serum as a measure of vapour pressure, osmotic pressure, and concentration of solutes, Â., III, 373.

Culbertson, C. C., and Thomas, B. H., relative efficiencies of different sources of calcium for growing and fattening spring

pigs in dry lot, B., 1404. Culbertson, J. L., and Dunbar, A., densities

of fine powders, A., I, 175. and Hedman, F. A., interfacial tensions of mercury-hydrocarbon oil systems, A., I, 300.

and Winter, L. L., heats of wetting of activated charcoal and silica, A., 1, 179. Cullinan, F. P. See Weinberger, J. H.

Cullinane, N. M., Morgan, (Miss) N. M. E., and Plummer, C. A. J., synthesis of heterocyclic compounds. II., A., II, 348.

Culpepper, C. W., Moon, H. H., and Lutz, J. M., determination of the internal gases

of plant tissues, A., III, 81. Culpin, C., relation between cultivation implements, soil structure, and the crop. III. Rolls: studying their action on soil, B., 1097.

Cultrera, R., determination of alcohol in "mute must," B., 1258.

Cumbers, C. F., and Coppock, J. B., dipotassium sodium cobaltinitrite and its

application to the gravimetric determination of cobalt, A., I, 633.

Cumings, J. N., and Carmichael, E. A., cerebrospinal fluid in spontaneous overbreathing tetany, A., Ill, 88.

Cumming, W. M., and Muir, G. D., dinaphthyldisulphonic acids, A., II, 183.

Cummings, C. E. See Thurston, R. R.
Cummins, A. B., Badollet, M. S., Miller,
M. C., and Johns-Manville Corp., apparatus for measuring [colloidal] turbidity, (P.), B., 1148.

and Johns-Manville Corp., heat-insulating composition, (P.), B., 510. Pulverulent cleaning composition, (P.), B., 1236.

Cummins, J. E., and Higginson, W. A., analysis of preservative-treated timbers. II. Determination of fluorine, B., 1057. Cunali, L., chrome tanning, B., 68.

Cunningham, B., Macintyre, M., and Kirk, P. L., microscopy of amino-acids and their compounds. III. Copper salts, A., II, 314.

Cunningham, B. B., and Saywell, L. G., methylene-blue induction period and virginity of olive oils, B., 152.

See also Saywell, L. G.

Cunningham, G. E., Gabler, H. E., and Peachin, W. S., adsorption of ions and physical character of precipitates. II. Ferric oxide and bentonite precipitates, A., I, 178.

Cunningham, G. L., Loseh, B. J., and Mathieson Alkali Works, chlorine

dioxide, (P.), B., 780. MacMullin, R. B., Robson, H. L., and Mathieson Alkali Works, sodium sesquicarbonate from bicarbonate, (P.), B., 666.

Cunningham, G. L., and Mathieson Alkali Works, production of magnesium chlorate, (P.), B., 1202.

Cunningham, H. S., yellow oxide of mercury treatment for seed potatoes on Long Island, B., 74. Addition of mercury compounds to the fertiliser mixture as a control for common scab of potato under Long Island conditions, B., 602.

Cunningham, I. J., distribution of magnesium in the animal organism: effect of dietary magnesium, A., III, 118. Grass staggers and magnesium meta-

bolism, A., III, 118.

Hopkirk, C. S. M., and Cunningham, M. M., relation of dietary protein to

sterility, A., III, 381. Cunningham, M. M., vitamin-D content of New Zealand fish-liver oils, A., III,

See also Cunningham, I.J.

Cunningham, O. C., and Addington, L. H., effect of early breeding on milk-energy production of pure-bred goats, B., 1128.

Cunningham, R. See Brody, S. Cunningham, R. N. See Peters, B. A. Cuno, C. H., and Cuno Eng. Corp., filters, (P.), B., 99.

Cuno Engineering Corporation. See Cuno,

Cupples, H. L., wetting and spreading properties of aqueous solutions; mixtures of sodium hydroxide with n-hexoic, n-octoie, n-decoie, laurie, myristic, and palmitic acids, A., I, 512.

See also Lathrop, F. H. Cupr, V., diffusion potentials. III., A., I, 414. Passivity of metals in relation to the theory of W. J. Müller, A., I, 620. and Marek, K., diffusion potentials.

IV., A., I, 414.

and Sirůček, J., hydrolysis of inorganic salts and benzenesulphonates of copper, A., I, 307.

See also Müiler, E.

Curcaneanu, D. Sce Nenitzescu, C. D. Curcio, L. Sce Chapman, G. H. Curd, F. H., and Robertson, A., usnic acid.

V., A., II, 347.

Curd, F. H. S. See Imperial Chem. Industries.

Curie, (Mme.) I., fourth radioactive family, A., I, 275. Nuclear stability in the region of the natural radioactive elements, A., I, 340.

Curie, M., phosphorescent glass, A., I, 11, 168.

and Preiswerk, P., activation of thulium by slow neutrons, A., I, 5.

Curl, A.C. See Mathews, J.A. Curran, B.C., and Wenzke, H.H., dielectric properties of acetylenic compounds. VII Alkyl- and aryl-propiolonitriles; resonance in the acetylene triple linking, A., I, 347.

Curran, H. A., and Dawson, T. R., "colloidal" zinc oxide, B., 66.

Currie, F. S., apparatus for treating sewage, (P.), B., 94.

Currie, L. M., and Nat. Carbon Co., articles from plastic [vinyl] compositions, (P.),

Currier, A. J., and Kagarise, E. H., rate of linseed oil oxidation with driers, B.,

Currier, L. W., origin of the bedding replacement deposits of fluorspar in the Illinois field, A., I, 484.

Curry, D. M., casting pure nickel, B., 246. Curry, J., benzol extraction, B., 405.

Curtin, L. P., copper compounds from metallic copper, (P.), B., 1047.

Payne, J. M., and Curtin-Howe Corp., coated [ferrous] metal, (P.), B., 1071. Curtin-Howe Corporation. See Curtin,

Curtis, A. L., borax, boric acid, and their less-known applications, B., 1199.

Curtis, C. C. See Cornell, M.

Curtis, D., anæsthetic solutions, (P.), B.,

Curtis, E. E., and Newman, J. E., plant for drying, conditioning, and otherwise treating cereals and other substances, (P.), B., 977.

Curtis, F. J., and Merrimac Chem. Co., [aluminium] colour lakes, (P.), B., 1090.

Curtis, G. M., Cole, V. V., and Phillips, F. J., blood-iodine in thyroid disease, A., III, 14.

and Puppel, I. D., increased urinary excretion of iodine in hyperthyroidism, A., III, 419.

See also Puppel, I. D.

Curtis, H. A., Abrams, A. J., and Tennessee Valley Authority, phosphate charging stock, (P.), B., 238.

Copson, R. L., and Abrams, A. J. metaphosphate investigation aims at cheaper fertilisers, B., 777.

Copson, R. L., Brown, E. H., and Pole, G. R., fertiliser from rock phosphate, B., 1100.

Miller, A. M., and Junkins, J. N., Tennessee Valley Authority estimates favourable costs for concentrated superphosphate. II., B., 235.

and Socony-Vacuum Oil Co., mineral oil composition, (P.), B., 323.

and Tennessee Valley Authority, apparatus for making phosphoric acid, (P.), B., 35. Dicalcium phosphate, (P.), B., 667. Ammoniated superphosphates, (P.), B., 667. Separating phosphorus, (P.), B., 780. Agglomer-Separating ation of fine phosphate rock, (P.), B., 909. Treating phosphate rock (r.), B., eliminate fluorine, (P.), B., 1336.

Curtis, H. J. Sco Fricke, H.

Curtis, J. T. See Hollaender, A.

Curtis, L. R., formate-ricinoleate broth in controlling ropy milk epidemics, B.,

and Hileman, J. L., comparison of media and incubation temperatures for making bacterial counts of spray-process dry skim milk, B., 833.

See also Stark, C. N.

Curtis, O. F., comparative effects of altering leaf temperatures and air humidities on vapour pressure gradients, A., III, 105.

and Herty, S. D., effect of temperature on translocation from leaves, A., III,

Curtis, W. E., Dickens, F., and Evans, S. F., "specific action" of ultra-short wireless waves, A., I, 113.

Curtman, L. J., and Lehrman, L., metal chimney for fusions, A., I, 380.

Cusa, N. W., and McCombie, H., unsaturated sulphides derived from the chloroethylenes, A., II, 271.

Cushing, H. See Thompson, K. W. Cushing, R. E., and Pennsylvania Salt Manufg. Co., ammonium salts [ammonium chloride], (P.), B., 238. Cusmano, G. Seo Passerini, M. Cusmano, S. See Angelico, F.

Custers, J. F. H., ultra-violet absorption spectrum of potassium perrhenate, A., 1, 393.

and De Boer, J. H., electrostatic and van der Waals adsorption of iodine on

fluoride layers, A., I, 25.
Cuthbertson, A. C. See White, D. O.
Cuthbertson, D. P., McCutcheon, A., and
Munro, H. N., effect of overfeeding on protein metabolism of man. I. Effect of superimposing raw and boiled milks on an adequate diet. II. Superimposition of beef (or soya flour)+lactose+butter, equivalent to a litre of milk, on an adequate diet, A., III, 209.

and Munro, H. N., effect of overfeeding on protein metabolism of man. III. Protein-saving effect of carbohydrate and fat superimposed on an adequate

diet, A., III, 209.

Cuthbertson, J. W., plane bending apparatus with interferometer strain recorder for metallurgical investigations, B., 1067. Cuthill, R., and Atkins, C., determination of thiocarbamide, A., II, 90.
Cutler, C. H. See Deuel, H. J., jun.

Cutler-Hammer, Inc. See Richardson, $L.\ T.$ Cutting, W. C., Dodds, E. C., Noble, R. L., and Williams, P. C., pituitary control of alimentary blood flow and secretion, A., III, 298.

See also Marshall, E. K., jun., and Newman, H. W.

Cuyler, W. K., Stimmel, B. F., and McCullagh, D. R., quantitative studies with the thyrotropic hormone [of anterior pituit-

ary gland], A., III, 73.

Cymboliste, M., inclusions in electrodeposits, their origin and their effect on the structure and mechanical properties, B., 453. Hardness of electro-lytic chromium, B., 797. Structure of electrolytic chromium, B., 1069.

and Salauze, J., blister pits in electrodeposits, B., 798.

Czaja, A. T., membrano effect of absorbing tissues and intake of dyes by living (plant) cells, A., III, 239.

Czajko, L., agglomerates having a base of asbestos-cement, (P.), B., 556.

Czarnetzky, E. J., extraction of labile bacterial antigen by disruption of bacterial cells at low temperature, A.,

See also Smith, D. E., and Weiss, C. Czech, J., and Kieffer, E., testing tendency of a porcelain glaze to become "smoked," B., 1048.

Czernotzky, A., determination of clouds, smoke, and dusts, B., 738. Czerny, H. See Koller, G.

Czimmer, A., pharmacological action of flavonol glucoside of species of Forsythia, A., III, 28. Sec also Jeney, A. von.

Czochralski, J., and Kaczyński, J., affination of silumin by means of alkali metals, B., 687.

and Schreiber, H., corrosion of brass in a moist ammonia atmosphere, B., 922. and Skowrońska, J., determination of

orientation of crystals of metals, A.,

Czornodola, W., syntheses in the pyran group; cis-tetrahydropyran - 2:6-dicarboxylic acid, A., II, 70.

Czurda, V., detection of oxygen elimination in assimilation of Thiorhodacex, A., III,

Dabrowski, L., new absorption band of bromine vapour at high temperatures, A., I, 385.

Dacey, J. R., and Coffin, C. C., homogeneous first order gas reactions. IX. Decomposition of furfurylidene

diacetate and crotonylidene diacetate, A., I, 570.

See also Coffin, C. C., and Parlee, N. A. D.

Dacha, U. See Lippmann, E. Dachary. See Valdiguié, P.

Dack, G. M. See Kelly, F. C. Da Costa, S. F. G. See Ettisch, G.

Da Cruz, A. See De Mira, M. F. Da Cunha, D. P., placental enzymes: phosphoesterase; succino-dehydrogenase and glycerophosphate-dehydro-genase, A., III, 220, 310.

and Jacobsohn, K. P., placental enzymes: fumarase, A., III, 30.

Dadieu, A., and Kopper, H., micro-

preparative methods in organic chemis-

try, A., I, 481.

Dadswell, C. J., Walker, T. R., and Whitehouse, F., manufacture of iron and steel castings in green sand, B., 917.

Daeva-Stepanenko, I. See Tzukerman, I. Daeves, K., and Trapp, K., annual loss by rusting of steel in Germany, B., 566.

Daft, F. S., Robscheit-Robbins, F. S., and Whipple, G. H., nitrogen metabolism of abscesses in anæmic and non-anæmic dogs; reserve stores of protein apparently involved, A., III, 459.

Daggs, R. G. See Hawley, E. E.

Dagneaux, E. L. K., hygienic examination of buttermilk, B., 490. Rapid determination of acetic acid in buttermilk, B., 490.

Dagys, J., yeast growth-substance in buds and leaves, A., III, 285.

Dahl, L. A., Hanna, W. C., and California Cement Co., Portland cement raw mixtures, (P.), B., 244. Portland cement, (P.), B., 244. 244. Portland

Dahl, O., Pfaffenberger, J., and Schwartz, N., iron-nickel alloys, B., 562.

Dahlberg, A. C., and Carpenter, D. C., influence of method of sterilising equipment on development of oxidised flavour in milk, B., 1120.

Kucera, J. J., Henning, J. C., and Hucker, G. J., mastitis. IV. Composition of milk affected by latent mastitis, A., III, 201.

and Maynard, L. A., feeding vitamin-A and -D concentrate in cod-liver oil

to calves, B., 494.

Dahlberg, G., follicular hormone and ovulation inhibition, A., III, 229.

Dahle, C. D., icc-cream defects. I. and II., B., 388, 612.

and Jack, E. L., electrokinetic potential

of milk fat, B., 1398. and Josephson, D. V., preventing oxidised flavours in ice cream, B., 1400.

See also Jack, E. L.

Dahle, D., [determination of] fluorine in foods, B., 975.

and Wichmann, H. J., fluorine distil-lation, A., I, 424. See also Stuart, L. S.

Dahle, F. B. See Cross, H. C. Dahlen, M. A. See Du Pont de Nemonrs & Co., E. I.

Dahlman, V., and Independent Air Filter Co., impermanent air-filter medium, (P.), B., 1414.

Dalilstrom, W. G. See Feldman, H. B. Dahr, P., production of "purified" solutions of hæmagglutinins, A., III, 454. Hæmagglutination with night birds of prey (Strigidæ, owls), A., III, 454. Daigo, K., glucoside and enzyme in garlie, Allium scorodoprasum, A., III, 161.

Dailey, M. E. See Smith, F. F

Dain, B. J., and Epstein, K. M., effect of negative catalysts on thermal decomposition of hydrogen peroxide in solution, A., I, 315.

Daines, R. H., antagonistic action of Trichoderma on Actinomyces scabies and Rhizoctonia solani, A., III, 396. Fungicidal action of mercury in soils, B., 1107.

Dainow, I., and Janeu, L., errors in the determination of vitamin-C in urine after arsenobenzene therapy, A., III, 282.

Dains, F. B. See Eberly, F. A.
Dakin, H. D., Ungley, C. C., and West, R.,
chemical nature of a hæmatopoietic substance occurring in liver, A., III, 8.

Dakshinamurti, C., light scattering, Raman spectra, and allied physical properties of some essential and vegetable oils, A., I, 444.

Dalal, G. A., and Nargund, K. S., condensation of succinic anhydride with the methyl ethers of dihydric phenols, A., II, 500.

Daland, G. A., and Worthley, K., resistance of red cells to hæmolysis in hypotonic solutions of sodium chloride; blood disorders, A., III, 4.

Sce also Patek, A. J.

Dalbert, R., triphenylamine as a stabiliser for B powders, B., 1279.

Dalby, G. See Hoffman, C. Dale, A. S., action of enzyme poisons on the frog's auricle, A., III, 351.

Dale, H. H., Feldberg, W., and Vogt, M., release of acetylcholine at voluntary motor nerve-endings, A., III, 132. See also Brown, G. L.

Dale, N. I., phosphatase and hexose phosphate in the banana, A., III, 98.
Dale, T. L. See Winterbottom Book Cloth

Co.

D'Alelio, G. F., and Reid, E. E., N-methylamides [of fatty acids], A., II, 90. N-Substituted aliphatic amides, A., II, 90.

Daletzki, G. F. See Gerschenovitsch, M. S. Daley, G. J., apparatus for cooling granulated sugar and eliminating sugar dust therefrom, (P.), B., 382.

Dalin, D., dryer, (P.), B., 300.

Dallemagne, M. J., determination of p_H by means of the glass electrode, A., I, 424.

D'Alleva, B. A., and Lovell, W. G., relation of exhaust-gas composition to air-fuel ratio, B., 105.

Dalma, G., affinity of alkaloids from Erythrophlaum guineense and of Digitalis glucosides, A., III, 179.

Dalman, L. A., ternary systems of carbamide and acids. IV. Carbamide, citric acid, and water. V. Carbamide, acetic acid, and water. VI. Carbamide, tartaric acid, and water, A., I. 363.

Dalsgaard, A. T., and Madsen, C. J. T., sterilisation of conline hydrobromide solutions, B., 841.

Dalton, A. J. See Zorn, C. M. Dalvi, P. D., prechlorination [of water] for algæ trouble, B., 1414. Daly, A. J. Sce Brit. Celanese.

Daly, C., and Dill, D. B., salt economy in humid heat, A., III, 378. See also Dill, D. B.

Daly, I. de B. See Alcock, P.

Dam, H., vitamin-K, the fat-soluble antihæmorrhagie vitamin, A., III, 441. Vitamin-K; determining its presence and quantity in agricultural products, B., 976.

and Lewis, L., concentration of vitamin-

K., A., III, 105. Schonheyder, F., and Lewis, L., vitamin-

K requirement of animals, A., III, 105. Damade, R., Servantie, L., and Pitous, A., comparative determination of hamoglobin in human anæmias by colorimetric

and iron methods, A., III, 336. Daman, A. C., flotation apparatus, (P.), B., 98. Rotary filters, (P.), B., 633. Classi-

fication of ores, (P.), B., 692. Damansky, A. F. See Reich, IV. S.

Dambier, H., mirrors of aluminium film obtained by thermal vaporisation of the metal in a vacuum, B., 796.

Damboviceanu, A. See Ionescu-Mihaiesti,

Dambrosi, R. G., resynthesis of muscular glycogen in the hypophysectomised toad, A., III, 320. See also Houssay, B. A.

Damerell, V. R., and Spremulli, P., areametric determination of small amounts of sulphate as barium sulphate, A., I, 261.

Dameshek, W., and Colmes, A., effect of drugs in the production of agranulocytosis with particular reference to amido-pyrine hypersensitivity, A., Ill, 424.

Damköhler, G., influence of streaming, diffusion, and heat transference on output of reaction furnaces. I. Development of a chemical process from small to large scale. II. Isothermal, constantvolume, homogeneous reaction of the first order. III. Maximal temperature in a tubular contact furnace for exothermal reactions, B., 399.

Damm, H., and Hornbostel, W., swelling of tinned sweetened milk products by β bacteria, B., 80.

Damm, P., degasification of bituminous coals, B., 637.

Damm, R. See Pesch, K. L.

Dammann, E., Lange, F. E. M., Bredig, M. A., and Nord, F. F., enzymie degradation of polyvinyl alcohol, A., III, 66.

See also Nord, F. F., and Rotini, O. T. Dammann, K., surface treatment of roads, (P.), B., 678.

Damodaran, M., and Nair, K. R., aminoacid dehydrogenases in germinating seedlings, A., III, 30.

and Sivaramakrishnan, P. M., new sources of urease for determination of urea, A., III, 354.

Damon, E. B. See Lamb, A. B.

Damour, E., position of pulverised coal in present industrial heating installations, B., 403.

D'Amour, F. E., Funk, D., and Glendenning, M. B., cestrin in rat pregnancy urine, A., III, 102.

Damschroder, R. E., and Shriner, R. L., synthesis of iretol, A., II, 288.

Dana, L. I. See Linde Air Products Co., and Union Carbide & Carbon Corp.

Dănăilă, N., and Cornea, (Mme.) J. M., distillation of Rumanian coal at low temperatures and reduced pressure, B.,

Dančević, L. See Iveković, H.

Danckwortt, P. W., determination of degree
of fineness of X-ray "contrast substances " [barium sulphate], A., I, 44. and Hotzel, J., determination of Tillmans' chloroamine value of essential oils, B.,

1134. Dane, E., vitamin-B group, A., III, 153.

and Brady, T., glucosides of bile acids. I., A., II, 19.
and Wang, Y., introduction of double linkings into bile acids and sterols. II. Production of cholestadienol, A., II, 417.

Wang, Y., and Schulte, W., introduction of double linkings into bile acids and sterols. I. Bromination of 3-ketocholanic acid and of cholestenone, A.,

II, 61.

Dane, (Frl.) E., Höss, O., Bindseil, A. W., and Schmitt, J., syntheses in the hydroaromatic series. II. Diene synthesis of derivatives of 1-acetylenyland 1-vinyl-3:4-dihydronaphthalene, A., II, 500.

Schmitt, J., and Rautenstrauch, O., syntheses in the hydroaromatic series. I. Condensation of methylcyclopentenedione with butadiene, A., II, 503.

Danes. See Paget, M.

Daneš, V. Z. See Chloupek, J. B.

Danforth, D. N., Greene, R. R., and Ivy, A. C., effect of female sex hormones on oxygen consumption of normal rats, and on tolerance to desiccated thyroid, A., III, 361.

Danforth, W. E. See Swann, W. F. G. Dangoumau, A., flours produced in the South-West region of France in 1936—1937, B., 1397.

and Debordes, G., extraction, separation, and determination of the esters of wines, B., 830. Extraction and preliminary examination of coloured compounds in red wines, B., 830.

Dangschat, G. See Fischer, H. O. L.

Daniel, D. M., and Cox, J. A., oriental fruit-moth control in quince plantings,

Daniel, E., and Scheff, G. J., determination of blood-carotene, A., III, 54.

Daniel, E. P., and Rutherford, M. B., ascorbic acid content of a number of citrus fruits, B., 1126.

Daniel, F. K., coagulation of rubber latices, (P.), B., 1092. Modifying the properties of rubber latices, (P.), B., $\bar{1}092.$

Freundlich, H., and Söllner, K., coagulation of latices by polar-non-polar

liquids, B., 948.

Daniel, H. A., physical changes in soils of the southern high plains due to cropping and wind erosion: relation between the (sand+silt)/clay ratios in these soils, B., 165.

and Langham, W. H., effects of wind erosion and cultivation on total nitrogen and organic matter contents of soils in the southern high plains, B., 163.

Daniel, H. R., naval stores industry, B., 1086.

Daniel, W. See Hein, F. Danielli, J. F., relations between surface $p_{\rm H}$, ion concentrations, and interfacial tension, A., I, 300. Activation energy of diffusion through natural and artieial membranes, A., I, 513. See also Clark, A. J., and Harvey, E. N. Daniels, A. L., and Everson, G. J. [with Deardorff, M. F., Knott, E. M., Scoular, F. I., and Wright, O. E.], magnesium requirements of pre-school children, A., III, 262.

and Everson, G. J. [with Scoular, F. I., and Deardorff, M. F.], effect of aspirin on urinary excretion of ascorbic acid, A., III, 93.

and Everson, G. J. [with Wright, O. E., Deardorff, M. F., and Scoular, F. L.], relation of ascorbic acid ingestion to mineral metabolism in children, A., III, 496.

Daniels, C. E. See Du Pont de Nemours

& Co., E. I.

Daniels, E. J., fusible alloys containing tin, B., 1221.

and Macnaughtan, D. J., use of tin in refrigerating equipment, B., 570.

Daniels, F. E., permanent chlorine standards [for water], B., 504.

Daniels, T. C., and Lyons, R. E., ethyl esters of tri-iodophenoxyacetic acids and potassium tri-iodophenoxyacetate, A., ÎI, 97.

Danilenko, A. I., and Djatschenko, M. M., application of a spark recorder for the measuring of the radiation of chemical reactions, A., I, 379.

Danilov, S. N., and Alexandrova, R. S., viscosity of solutions of cellulese ethers (ethylcellulose), B., 1321.

and Konkova, V. A., hydroxybutyl-cellulose and its mixed ethers. I. Synthesis and properties of hydroxy-

butylcellulose, B., 24.
and Rizov, S. M., analysis of viscose,
B., 1187. Partition of carbon disulphide between cellulose xanthate and

by-products, B., 1320. and Roguleva, L., physico-chemical characteristics of viscose-precipitating baths, B., 331.

Danilov, V., structure of some aqueous solutions of electrolytes, A., I, 225.

Finkelstein, V., and Levaschevitsch, M., X-ray determinations of structure of some complex ions in solutions of electrolytes, A., I, 184.

and Radtschenko, I., structure of liquid metals, A., I, 171. Scattering of X-rays in liquid alloys, A., I, 171 $ilde{.}$

Danilova, A. K., and Nefedjova, V. A., composition of duck eggs, B., 613. Danilova, V. V. See Vinogradov, A. P.

Daniluschkina, E. I. See Babaeva, A. V. Daniluschkina, L. See Ponomarev, V. Daniluschevski, J. L. See Zinkov, Z. E.

Dann, F. P., vitamin-B assay using rat curative method with modified diets and oral administration of addenda, A., III. 404.

Dann, M. See Barker, S. B. Dann, W. J., vitamin- B_2 complex. I. Non-identity of rat dermatitis due to vitamin-B₆ deficiency and the dermatitis of human pellagra, A., III, 281.

and Satterfield, G. H., vitamin-C in pasteurised milk, A., III, 201.

Dannatt, C., rapid test for thermal resistivity [of insulating materials], B., 1142. Dannenbaum, H., active principles of the male generative glands, A., III, 492. See also Butenandt, A.

Dannenberg, H. See Butenandt, A. D'Ans, J., application of the law of diffusion to nutrient intake of plants, B., $\mathbf{D}^{\prime}\mathbf{Ans}, J.$, and $\mathbf{Busch}, F.$, fractionation of isomorphous double salts forming incongruent solutions; quaternary systems KCl-RbCl(CsCl)-MgCl₂-H₂O at 25°, A., I, 363.

and Höfer, P., system CaSO3-H3PO4-H₂O, A., I, 137.

and Schuppe, W., citrate-solubility of phosphate [fertilisers], B., 270. and Tollert, H., specific heat of concen-

trated aqueous salt solutions, A., I, 186.

Dansi, A., Friedel-Crafts reaction between oxalyI chloride and I:2-benzanthracene, A., II, 285.

See also Bachmann, W. E.

Dansk Sojakagefabrik A./S. See Helstrup, L. K. V.

Dantchakoff, V., effect of the female sex hormone on reptiles, A., III, 401.

Dantes, D. A. See Soffer, L. J.

Dantlo, G., esterification of Congo copal in varnish industry, B., 590.

D'Antoni, A., and Cecchetti, P., ceramic products, (P.), B., 673.

Dantuma, R. S., moisture-permeability of paint and lacquer films. I. and II., B., 590.

Danulat, F., complete gasification of solid fuels with oxygen under high pressure, B., 104.

Danz, W. See Sieverts, A. Danzel, L., derris insecticide, B., 1107.

Darapsky, A., and Berger, H., degradation of p-hydroxydiphenylacetic acid to phydroxybenzhydrylamine, A., II, 101.

Berger, H., and Neuhaus, A., action of hydrazine hydrate on Iactones, A., IĬ, 85.

Darby, G. M. See Miller, A. L.
Darby, H. H., and Clarke, H. T., plant
origin of a vitamin-D, A., III, 283.
Darby, P. F., and Bennett, W. H., negative

atomic hydrogen and deuterium ions, A., I, 591.

Darby, W. J. See Day, P. L.

Darbyshire, O., the 311, state and the absorption continuum of the bromine molecule, A., I, 1. Absorption spectrum of bromine in the near infra-red, A., I,

Darcey, H. J., treatment of sewage, (P.), B., 398.

Dargie, A., rapid determination of trichloroethylene vapour in air of rooms, B., 1307,

Darikina, M. I. See Bork, A.

Darken, M. See Gustaîson, F. G.

Darkis, F. R., Dixon, L. F., Wolf, F. A., and Gross, P. M., flue-cured tobacco; composition of flue-cured tobaccos produced on limed and non-limed soils under varying weather conditions, B.,

Darley, A., practical advice for electroplaters on cleaning [of metals] before plating, B., 1068. Test-pieces in plating baths, B., 1069.

Darling, D. See Foley, E. F.
Darlow, A. E., and Hawkins, L. E., influence of nutrition on physiology of reproduction in sheep, A., III, 466.

D'Aroma, G. See Stolfi, G.

Daron, A. See Nottin, P.

Darrah, W. A., evaporation and equipment therefor, (P.), B., 634. Treatment of materials; [partial oxidation of hydrocarbons], (P.), B., 1013.

Darraspen, E., and Florio, R., bloodcholesterol in nephritis in dogs, A., III, 90. Dart, E. E., streptococcus anticoagulant, A., III, 115.

Darzens, G., condensation of ethyl dichloroacetate with ketones and aldehydes by very dilute amalgams, A., II, 101. Synthesis of glycerol, A., II, 174.

and Levy, A., condensation of ethyl dichloroacetate with ketones and aldehydes by magnesium amalgam, A., II, 192.

Das, A. See De, R.

Das, K. R. See Joshi, S. S.

Das, N. B., identity of lactic and malic dehydrogenases, A., III, 352. Inhibition of succinic and lactic-malic dehydrogenases, A., III, 352. See also Bentsath, A.

Das, N. N. See Chopra, R. N.
Das, U. K., nitrogen nutrition of sugar cane, B., 73.

Dasannaeharya, B., and Moorthy, T. S. K., . sensitiveness of a Geiger point counter in region between its threshold voltage and voltage for constant counting, A., I, 267. Daschevski, M., and Karischin, A., balogenation of accnaphthene, A., II, 490.

Da Schio, E., determination of lanital, B.,

Daschner, H. See Schwarz, M. von.
Dascola, G. See Speechia, O.
Das Gupta, C. R. See Napier, L. E.
Das-Gupta, H. N., organo-arsenic compounds. IV. Heterocyclic ring containing arsenic. V. Synthesis of arsindole derivatives. VI. Synthesis of 1ehloroarsindole from cinnamio acid. VII. Synthesis of arsindole derivatives, A., II, 435, 475, 528. Simultaneous determination of chlorine, nitrogen, and arsenic in organo-arsenic compounds, A., II, 476.

Das-Gupta, P. N. See Sil, K. M.
Das-Gupta, S. J. See Basu, U. P.
Das Gupta, S. M. See Wilson, H. E. C. Dassler, A., volumetric electro-analysis of gases; apparatus for determination of hydrogen and for separation from methane, A., I, 529.

Dastugue, G. See Dodel, P.
Dastur, N. N., and Giri, K. V., in vitro

digestion of fats, A., III, 139. See also Venkatasubban, A.

Dastur, R. H., and Raut, M. R., carbohydrate: nitrogen ratio of shoots of some tropical trees, A., Il1, 158.

and Solomon, S., effect of blue-violet rays on formation of carbohydrates in

leaves, A., III, 159.

Dathe, J. See Meyer, W.

Datin, R. C., and Atmospheric Nitrogen
Corp., heating of materials [metal for brazing and welding], (P.), B., 580. Datnow, M., value of lead compounds in

treatment of malignant tumours, A., III, 12.

Datta, R. L., and Basu, T., perfuming of washing-soaps, B., 151.

Datta, S., and Deb, M. M., paramagnetism. IV. Ultra-violet absorption spectra of paramagnetic halides in solution and the nature of chemical linkage in them, A., I, 342.

Dattler, G. See Schwab, G. M.
Dauber, C. G., material treating [reducing] device, (P.), B., 992.

Daubner, W., volumetric determination of potassium, A., I, 46.

Daubois, A., rustless steels for ornamentation, B., 1216.

Daughenbaugh, P. J., and Sharp & Dohme, Inc., arsenic derivatives of sugars, (P.), B., 288.

Daugherty, J. P., jun., and Houdry Process Corp., conversion of hydrocarbons, (P.),

Daumas, C. V., swelling starch, etc., (P.), B., 1394.

Daumiller, G. See Staudinger, H.

Daunt, J. G., Keeley, T. C., and Mendelssohn, K., absorption of infra-red light in superconductors, A., I, 174.

and Mendelssohn, K., equilibrium curve and entropy difference between superconductive and normal state in lead, mercury, tin, tantalum, and niobium, A., I, 451.

See also Mendelssohn, K.

Dauthy, M. E., and Abadie, (Mlle.) G., retardation of eider fermentation by restricting nitrogenous nutriment, B., 177.

Dautrebande, L., Angenot, P., and Dumoulin, E., esparto pulp anti-aërosol filters; influence of relative humidity on puncturing of anti-aërosol filters; influence of time of passing of the humid atmosphere; puncturing of anti-aërosol filters by ageing tests with water vapour; their subsequent regeneration; protection of anti-aërosol filters against moisture by a layer of dehydrating material, A., I, 537, 584.

Dauzère, C., electrical conductivity of air in a potash mine in Catalonia, A., I, 154. Davanzo, I. G., phosphatide metabolism.

A., III, 304.

Dave, K. P., and Nargund, K. S., preparation of β-4-methoxy-1-naphthoylpropionic acid, A., II, 245.

Davenport, E. S., austempering [of steel], B., 1214. and Bain, E. C., ageing of steel, B., 790. Davenport, H. A. See Chor, H. Davenport, H. W. See Borsook, H.

Davenport, J. A., apparatus for purifying swimming-bath water [with chlorine], (P.), B., 986.

Davenport, J. E. See Evans, R. N. Davenport, S. J. See Harrington, D. Davenport Engineering Co., Ltd. See Gill,

F. E.Davey, D. G., physiology of nematodes, A., III, 474.

Davey, N., temperature effects in mass concrete, B., 785.

Davey, W. P., chemical analysis by X-ray diffraction methods, A., I, 374.

David, E., and Schmidt, A. F., canning of

fish, (P.), B., 1405.

David, E. (Hamburg), polarisation of electrons by scattering in crystals, A., I,

David, E. (Wien). See Wacek, A. von. David, Hellmut, water determination by distillation with perchloroethylene, B., 717. Perchloroethylene distillation for rapid and accurate determination of water in [beet-]sugar factory products and other materials, B., 1114.

David, Hellmuth. See Vorländer, D.

David, M. See Bompiani, R.

David, R. Sec Régnier, J.
David, W. T., gaseous combustion, A., I, 86. Combustion levels, A., I, 141. Temperature of open flames, A., I, 190. Latent energy of combustion, A., I, 246. Factors influencing the height of the combustion levels attained in flame gases, A., I, 247.

Davidenkov, N. N., influence of reduction of height of Charpy samples on the impact-resilience value, B., 987.

and Kukanov, L. I., determination of

conditional yield point, B., 354.

Davidov, A. L., and Avrunina, A. M., application of a selenium photocolorimeter to chemical analysis, A., I, 329.

Davidov, B., velocity distribution of electrons in an electric field. II., A., I,

Davidova, M., Pankina, Z., and Tischt-schenko, D. V., aliphatic chloro-derivatives. IV. Chlorination of iso-pentane, A., II, 82. Sec also Dobrjanski, A. F.

Davidova, N. See Varlamov, V. Davidovskaja, E. A. See Krestovnikov, A. N., and Sementschenko, V. K.

Davidsohn, A., and Davidsohn, J., composition of olein[c], B., 1367. See also Davidsohn, J., and Davidsohn, T.

 Davidsohn, J., and Davidsohn, A., detergent action of soaps, B., 585. Medicated soaps, B., 696. Bleaching of [fatty] oils with bleaching earths, B., 938.

See also Davidsohn, A. Davidsohn, T., and Davidsohn, A., turpen-

tine, B., 1238.

Davidson, A. M., and Gregory, P. H., socalled mosaic fungus as an intercellular deposit of cholesterol crystals, A., III, 124.

Davidson, A. W., recent advances in electrochemistry of non-aqueous solutions, A.,

I, 461.

Davidson, C. Sec Giragossintz, G.

Davidson, D., formulation of Prussian-blue, A., I, 422. Prussian-blue paradox, A., I, 422.

and Epstein, Elias, murexide question, A., II, 35.

See also Perlman, D.

Davidson, G. F., solution of chemically modified cotton cellulose in alkaline solutions. III. In solutions of sodium and potassium hydroxides containing dissolved zinc, beryllium, and aluminium oxides, B., 423.

Davidson, G. W. See Internat. Combustion. Davidson, J. M., Berk, A. A., Conley, J. E., and Partridge, E. P., potash from polyhalite; relation between calcination conditions and extraction behaviour, B., 539.

Davidson, O. W. See Blake, M. A. Davidson, R. H. See Howard, N. F.

Davidson, S. See Ralli, E. P. Davidson, S. G. See Morgan, T. N.

Davidson, W., production and performance of domestic coke, B., 637.

Davidson, W. F., [transformer] oil acidity pipette, B., 111.
Davidson, W. M. See Watson, C. J.

Davidson, W. W., solvent degreasing [of

metals], B., 1358.

Davie, T. M. See Bennett, T. I.

Davies, A. W., and Moore, T., vitamin-A

and carotene. XV. Influence of vitamin-A reserve on the length of the depletion period in the young rat, A., III,

Davies, B., the nation's milk supply; hygienic production and control, B.,

Davies, B. L., secondary changes during vulcanisation of ebonite. I., B., 160. Davies, C., and Smyth-Homewood, G. R. B

machinery used in spraying. IV. Nozzles, B., 989.

Davies, C. W., conductivity of potassium chloride solutions, A., I, 244, 519. Conductance of potassium ferrocyanide solutions, A., I, 566.

and Robinson, R. A., solubility product of thallous iodide at 25°, A., I, 307.

See also Robinson, R. A.

Davies, D. B., bleaching chemical wood pulp, (P.), B., 1037.

Davies, D. T., and Hicks, D., coal breaking,

B., 198.

Davies, E. C., and Powell, Alan R., platinum plating from alkaline solutions, B.,

Davies, E. L. See Thomas, William. Davies, G. P. See Imperial Chem. In-

dustries. Davies, G. R. See Morgan, (Sir) G. T.

Davies, G. V., recent developments in the true vapour-phase process [for cracking petroleum], $\hat{\mathbf{B}}$., 1156. Davies, H. See Weizmann, C.

Davies, J. A. Sec Sage, B. H. Davies, J. A. B. Sec McKhann, C. F.

Davies, J. G., fractional liming and doubleheating process [for cane-juice clarification] at Caymanas, Jamaica, B., 379.

Lai-Fook, C. O., and Moinuddin, M., interrelationship of calcium sulphite and phosphate in the clarification of sugar-cane juices, B., 483.

Davies, J. S. H. Sec Imperial Chem. Industries.

Davies, L. J. Sec Brit. Thomson-Houston

Davies, M. M., kinetics of an esterification reaction in benzene, A., I, 143.

Davies, R. See Plank, J. E. van der. Davies, R. J., Green, R. A., and Donnelly,

H. F. E., china clay, B., 671. Davies, R. M., and Thomas, I. H., measure-

ment of Young's modulus for imperfectly elastic metals, A., I, 228.

Davies, R. O., and Milton, W. E. J., response of grasses and clover to treatment on acidic upland soils: effect of herbage plants on reaction of acidic soils. III. Comparison of Molinia and fescue soils, B., 1102.

Davies, T. E., heat treatment of tins, bottles, and similar containers containing fruit, vegetables, etc., (P.), B., 727.

Davies, W., catalytic combustion of acetylene, A., I, 252.

and Spence, R., catalytic combustion of formaldehyde on a platinum wire, A., I,

Davies, William, Atkins, G. A., and Hudson, P. C. B., effect of ascorbic acid and certain indole derivatives on regeneration and germination of plants, A., III, 284.

and Field, D. J., vitamin-A content of Australasian fish liver-oils. I., A., III,

See also Crook, E. M.

Davies, W. C., and Addis, H. W., basic strengths of tertiary amines, phosphines, and arsines, A., I, 565.

and Cox, R. G., formation and decomposition of quaternary ammonium salts in solution, A., I, 313.

Davies, W. L., zeolites as analytical reagents for examination of milk cations, A., III, 297. Flavour and aroma of butter, B., 180. Milk-fruit juice mixtures, B., 283.

Davies, W. L., analyses of dairy products. I. and II., B., 388, 611. Lactose, or sugar of milk, B., 964. Commercial dried whey, B., 971. Colouring matters in dairy products,

Davis, J. G., Dearden, D. V., and Mattick, A. T. R., Cheddar cheese. V. Effect of chemical substances on ripening process, B., 491.

See also Davis, J. G.

Davies, W. M., soil acidity from the

advisory viewpoint, B., 1249. Botham, G. H., and Thompson, W. B., grass silage; comparison of changes involved in the ordinary, molasses, and A.I.V. processes, B., 616.

and Hobson, R. P., sheep blowfly investigations, B., 826.

Davis, A. F., are-welding in pipe-line construction, B., 1352.

Davis, B. L., jun., and Luck, J. M., effect of acetylcholine and other constituents of the adrenal gland on blood-sugar and -amino-acids, A., III, 265.

Davis, C., and Farrer, IV. G., apparatus for removing sediment and scum from settling tanks or reservoirs, (P.), B., 5. Sedimentation tanks or reservoirs, (P.), B., 511.

Davis, C. F., collaborative study of the Blish-Sandstedt, Schoorl, and Bertrand methods for determining reducing sugars in flour diastatic-activity measurements, B., 385. Size of baking pan in experimental baking, B., 386.

Davis, C. H., and Amer. Brass Co., copper and copper-base alloys, (P.), B., 580. Munson, E. L., and Amer. Brass Co.,

copper-base alloys, (P.), B., 580. Munson, E. L., Smith, C. S., and Amer. Brass Co., copper-silicon-cadmium alloys, (P.), B., 580.

Davis, C. IV. See Dean, R. S., and U.S.

Bureau of Mines.

Davis, D. S., nomographic charts for volume relations of gases at high pressures, B., 1045.

Davis, E. A., plastic behaviour of metals in the strain-hardening range. II., B.,

Davis, E. F., new electric process for [metal hardening in] cyanide and activated baths, B., 578.

Davis, E. L. See Texas Co.

Davis, F. H. See Groggins, P. H.
Davis, F. M. See Woollett, G. H.
Davis, G. H. B. See Standard-I.G. Co., and Standard Oil Development Co.

Davis, H. A., water balance. I. Excessive oxygen usage response of dehydrated animals to water and electrolytes. II. Anoxemie factor in water intoxication. A., III, 62.

Davis, H. E., and Kelly, J. W., rating characteristics of fresh concrete, B.,

See also Davis, R. E.

Davis, H. L., and Goodchild, C. E., emulsion stability and fat embolism, B., 151.

Davis, H. P. See Hathaway, I. L. Davis, H. S., Francis, A. W., and Socony-Vacuum Oil Co., alcohols, (P.), B., 758.

Davis, J. D., blending properties of certain high-volatile coals as brought out by high-temperature carbonisation, B.,

See also Atkinson, R. G., Fieldner, A. C., and Schmidt, L. D.

Davis, J. G., dairy bacteriology. II. Sources of bacteria. III. Conditions controlling bacterial growth. IV. Types of bacteria in milk and its products. V. Destruction of bacteria by heat. VI. Pasteurisation of milk; general bacteriology. VII. Thermophilic and thermoduric organisms, B., 179, 281, 388, 611, 971. Acidity of milk, B., 722. Rheology of cheese, butter, and other milk products; measurement of body and texture, B.,

Davies, W. L., and Mattick, A. T. R., Cheddar cheese. VI. Degradation of milk proteins by lactic acid bacteria isolated from cheese, alone, with sterile rennet, and with whole rennet, B., 972. and Mattick, A. T. R., mastitis in re-

lation to cheese-making, B., 1262. See also Davies, W. L.

Davis, J. H., treatment of grain for exterminating insect life therein, (P.), B.,

Davis, J. J., significance of supplementing controls in combating codling moth, B., 714.

Davis, K., and Peale-Davis Co., separation of intermixed divided materials, (P.),

Davis, L. H. See Cone, R. M. Davis, L. L., and Continental Oil Co., [portable lubricating] oil-testing device,

(P.), B., 19. Davis, M. N., Malmstrom, H. E., and Paper Patents Co., apparatus for testing smoothness of paper, (P.), B., 1038.

Davis, M. T., behaviour of manganese in the cupola, B., 788.

Davis, N. D., apparatus for mixing liquids, (P.), B., 634.

Davis, R. See Pyle, S. I., and Richardson, J. E.

Davis, R. E., Carlson, R. W., Kelly, J. W., and Davis, H. E., properties of cements and concretes containing fly ash [from furnaces burning pulverised coal], B., 1208.

Kelly, J. W., Troxell, G. E., and Davis, H. E., properties of mortars and concretes containing Portland-puzzuolanic cements, B., 915.

Davis, R. F. See Universal Oil Products Co. Davis, (Sir) R. H. See Levy, L. A.

Davis, R. O. E., and Scholl, W., ammoniation of organic materials, (P.), B.,

See also Scholl, W., and Yee, J. Y. Davis, S. H., Anderson, C. O., Stengl, R. J., and Ozark Chem. Co., apparatus for recovering crystalline salts [Glauber's

salt] from solutions, (P.), B., 666.

Davis, T. L., and Ehrlich, P., compound of cuprous chloride with phosphorus trichloride, A., I, 40.

and Logan, A. V., metal pyridine complex salts. V. Volume change during formation of cyanates and thio-cyanates, A., II, 31. and Yelland, W. E., addition of butyl-

amine to butyl isocyanide, A., II, 487.

Yelland, W. E., and Ma, C. C., carbamide series. XIV. Structure of the evidence from guanidonium ion; electrolysis, A., II, 488.

Davis, T. W., and Kornblum, N., detection

of barium ion in presence of phosphate ion, A., I, 199.

Sec also Burton, M. Davis, W. R. See Morrell, R. S. Davison, F. R., tissue extracts and blood

coagulation, A., IlI, 373.

Davison Chemical Corporation. Connolly, G. C., Hardick, W., Holden, E. C., Wiggins, D. H., and Wilson, A. C. Davitaschvili, E. See Tananaev, I. V. Davol Rubber Co. See Hanna, E. L.

Davson, H., loss of potassium from the erythrocyte in hypotonic saline, A., IIĬ, 449.

See also Benham, G. H.

Davuidov, G. K., electric charge of soil particles, B., 376. Absorption of phosphorie acid by plants from soils saturated with various cations, B., 377.

Dawans, A., cast iron resistant to high

temperature, B., 1348.

Dawidowski, R., graphical representation of the gas-producer process, B., 1154. Dawihl, W., and Flüshöh, R., etching method for determining the structure

of melted boron carbide, B., 1206. and Schröter, K., preparation and

properties of titanium monoxide, A.,

K., and Stockmayer, M., Schröter. determination of grinding power of various abrasives in comparison with diamond, B., 139.

Dawsey, L. H., Cressman, A. W., and Hiley, J., relative quantities of oil deposited on paraffin-coated plates and

on plant foliage by oil sprays, B., 711. Dawson, H. C. See Brassert & Co., H. A. Dawson, H. M., kinetics of the component reactions in the idealised hydrolysis of sodium bromoacetate, A., I, 467. See also Burr, (Mrs.) M. S.

Dawson, J. R. See Linde Air Products, Co. Dawson, L. H., and Hulburt, E. O., scattering of light by water, A., I, 496.

Dawson, M. H. See Kendall, F. E. Dawson, P. R. See Deemer, R. B. Dawson, R. B., earthworm as a harmful

factor in turf, B., 710.

and Ferro, R. B., earthworm control without the aid of water, B., 481. Control of leather-lackets. I. Use of lead arsenate, B., 710.

Dawson, S. E., melting of cast iron in the foundry, B., 245.

Dawson, T. R. See Curran, H. A., and

Messenger, T. H.

Dawton, R. H. V. M., intensities of X-ray reflexions from single crystals of sodium between 120° and 370° abs., A., I, 399. Improvements in the integrating photometer for X-ray crystal analysis, A., 1, 427.

Day, A. L. See Allen, E. T. Day, A. R. See Charlton, R. W.

Day, G. A., factors in soda losses in alkaline pulping [of wood], B., 894.

Day, G. C., and Mathieson Alkali Works, distillation of ammonia from aqueous ammoniacal brines, (P.), B., 237.

Day, H. B., treatment of glomerulo-nephritis by antigen, A., III, 90.

Day, J. J., and Webster, D. R., autoregulation of gastric secretion, A., III,

Day, L. G., Magnesium Castings & Products, Ltd., and High Duty Alloys, casting of metals [magnesium] and ladles therefor, (P.), B., 358. Melting, refining, and preparation for casting of metals such as magnesium and its alloys subject to attack by the atmosphere, (P.), B., 458.

Day, P. L., blood-sugar in rats rendered cataractous by dietary procedures, A.,

III, 205.

Day, P.L., and Darby, W.J., inverse relation between growth and incidence of cataract in rats given graded amounts of foods containing vitamin-B2, A., III,

Darby, W. J., and Langston, W. C., identity of flavin with the cataractpreventive factor, A., III, 495.

Day, R. B. See Universal Oil Products Co.

Day, W. E., jun., and Internat. Motor Co., heat treatment of metals, (P.), B., 689.

Daynes, H. A., absorption and diffusion of water in rubber, B., 814.

Porritt, B. D., and Scott, J. R., silica as an ingredient of ebonite for use at

radio frequencies, B., 703. See also Church, H. F., and Cooper, L. H. N.

Dayson, S., and Parten, J. R., reactivation

of hydrocarbons, (P.), B., 1305.

Dayton Synthetic Chemicals, Inc. See

Thomas, C.A.D'Azambuja, L., and D'Azambuja, (Mme.) L., monochromatic images of the sun obtained on the spectroheliograph with the infra-red helium line λ 10,830, the

violet line He of hydrogen, and the infrared lines λ 10,938 and λ 10,049 of same element, A., I, 590.

D'Azambuja, (Mme.) L. See D'Azambuja,

De, H. P., internal conversion in aluminium, A., I, 5. De, N. See Chopra, R. N.

De, N. K., spectrographic analysis of thyroid glands, A., III, 294. Vitamin-A activity and ultra-violet light: spectrophotometric method of assaying vitamin-A and carotene, A., III, 324. Assimilation of vitamin-A and carotene by rats from some common foods: conversion factor, I.U./E., proposed by the International Vitamin Conference, A., III, 363. Spectrophotometric method of assaying vitamin-A and carotene; vitamin-A activity of Indian foodstuffs, A., III, 363. Carotene content of some Indian vegetable foodstuffs; variation due to storage. I. and II., B., 976.

See also Ranganathan, S.

De, N. N. See Chopra, R. N. De, P. K., nitrogen supply of rice. Fixation of nitrogen in rice soils under waterlogged conditions, B., 1102.

and Pain, A. K., biochemical study of paddy soils of Bengal, with special reference to their nitrogen-fixing capacities, B., 269. Organic nitrogen of paddy soils. I. Distribution of humic and non-humic nitrogen in organic matter, B., 1101.

De, R., twin elements in Travancore monazite, A., I, 383.

and Das, A., chemical state of uranium- X_1 which accompanies uranyl salts, A., I, 528.

De, S. C., and Rakshit, P. C., syntheses in the pyrazolone series. IV. Action of aminoguanidines on β -ketonic esters and β-diketones, A., II, 34.

De, S. S. See Ghosh, B. N. De, U. N. See Bose, J. P.

Deahl, T.J. See Noyes, A.A.

Deal, H. P., treatment of wearing apparel, fabrics, etc., made from artificial silk, rayon, and natural silk, (P.), B., 1330.

Deal, J. L. y., lactation and blood-sugar, A., III, 113.

Dean, D. K., and Foster Wheeler Corp., heat-recovery system, (P.), B., 3. Sieder, E. N., and Foster Wheeler Corp.,

fractionating apparatus, (P.), B., 634. Dean, G. A., Cotton, R. T., and Wagner, G. B., flour-mill insects and their control,

B., 178. Dean, H. C., effect of liming on liberation of

potassium in some Iowa soils, B., 706.

Dean, H. L., bacteriological and chemical effects of calcium and magnesium limestones on certain acid Iowa soils, B., 707.

Dean, H. P. See Imperial Chem. Industries.

Dean, H. T., minimal threshold of dental fluorosis, A., III, 461.

Dean, J., and Campbell, D., acoustic material, (P.), B., 787.

Dean, R. B., and Gatty, O., bio-electrical properties of frog skin, A., III, 387.

Dean, R. S., progress reports [of United States Bureau of Mines], Metallurgical Division, B., 50, 488. Recent advances in crushing and grinding, B.,

Clemmer, J. B., and Cooke, S. R. B., use of wetting agents in flotation, B., 1063. and Davis, C. W., magnetic concentration of ores, B., 43. Physical properties of magnetite and its possible uses as an industrial material, B., 917.

Dean, W. A. See Aluminum Co. of America.

Deane, C. W., kinetics of sulphuric acid condensation of o-benzoylbenzoic acid, A., II, 294.

Deane, H. A., practical sand control in grey-iron foundries, B., 1211.

Deanesly, R., and Parkes, A. S., biological properties of some new derivatives of testosterone, A., III, 362.

Deanesly, R. M. See Internat. Hydrogenation Patents Co., and Shell Development

De Angelis, E., reaction with iron compounds for determination of B. anthracis

and of its pathogenicity, A., III, 317.

Dear, P. S. See Taylor, N. W.

Dearborn, F. E., homologues of Paris green [insecticides]. II. Higher members of the acctic series, B., 711.

Dearborn, R. B., nitrogen nutrition and chemical composition in relation to growth and fruiting of the cucumber plant, B., 599.

See also Kertesz, Z. L.

Dearborn, R. J. See Texas Co.

Dearborn Chemical Co. See Reynolds, A. II.

Dearden, D. V. See Davies, W. L. Dearden, J., factors affecting ramming

density of [moulding] sand, B., 1217. Dearden, W. H., grinding and polishing for

metallography, B., 145.

Deardorff, M. F. Sec Daniels, A. L.

Dearing, Le R. M., and Antioch Industrial

Res. Inst. Inc., distillation and extraction, (P.), B., 741.

Dearystyne, R. S. See Halverson, J. O.Deas, C. A., dilution of horizontal coal gas, B., 105.

De Ath, G. C. See Briggs, L. H. Deaton, W. M., gas hydrates and their relation to pipe-line corrosion, B., 106. and Frost, E. M., gas hydrates in natural gas pipe lines, B., 1002.

Deb, M. M. See Datta, S.

Deb, S., absorption spectra of zine and cadmium halides in the vapour state, A., I, 392.

De Barenne, J. G. D., McCullouch, W. S., and Nims, L. F., changes of $p_{\rm H}$ of the cerebral cortex, A., III, 415.

De Bartholomaies, E. See Tocco, G.

De Bats, J. H. L., powdered metals, (P.), B., 935.

De Bautre, W. L., cooling and drying of moint gases, (P.), B., 402.

De Beer, E. J. See Buck, J. S., and

Hjort, A. M.
De Bell, J. M., ethylcelullose, B., 331.

Debelli, V. See Trost, F. De Belsunce, G., drying of copra, I., B.,

1402. Debenedetti, E., and Pancirolli, F., spon-

taneous fibrous urticacea from Ethiopia, B., 890.

Debenham, W. R., and Haydon, F. G., erosion of sparking-plug electrode materials and variation of sparking-plug voltage, B., 936.

Debenham, W. S. Scc Parmelee, C. W. De Bernadi, A., jun. See Eader, W. H. De Berry, C. R., asphalt grout, (P.), B.,

1346.

De Béthune, P., hydrostatic prospecting balance, A., I, 268.

Debierne, A., new mode of transformation, A., İ, 457.

and Goldstein, L., transformations produced at low temperatures ("frigadréactions "), A., I, 577. De Blottefière, R., use of calcium borate as

pandermite in ceramics, B., 1339.

De Boer, J. H., nature of colour centres in alkali halide crystals, A., I, 279, properties of chemical B., 296. Possibility of Physical weapons. protecting large industrial concerns with high concrete buildings against

attacks from the air, B., 503. and Verwey, E. J. W., semi-conductors with partially and with completely filled 3d-lattice bands, A., I, 550.

See also Bruining, H., Custers, J. F. H., N. V. Philips' Glocilampenfabr., and Radio Corp. of America.

De Boer, S., and Bronwer, A., action of medicines on auricular fibrillation. II. Action of hydroquinidine, quinidine, hydroquinine, and quinine, A., III, 218.

and Holtcamp, H. H. J., action of medicines on auricular fibrillation. I. Influence of hydroquinine, hydroquinidine, quinine, and hydroquinidine. free quinidine on auricular fibrillation

in cats, A., III, 217.

De Booys, J. See Bredée, H. L.

Debordes, G. See Dangouman, A.

De Broekers, P. J., spreading of chemical armaments by aeroplane, B., 296.

De Broglie, L., recent theories of light, A., I, 391. Quantisation of the field in

theory of the photon, A., I, 492.

De Brouckère, (Mlle.) L., adsorption of electrolytes on crystalline surfaces. VII., A., I, 611.

and Petit, R., colorimetric determination of silver as colloidal sulphide, A., I, 149.

De Bruin, M., and Bouman, J., ricketsproducing action of cereals, A., III,

De Bruin, T. L., new terms in the spark spectra of argon, A II and A III, A., 1, 271.

Lier, J. N., and Vliet, H. J. van de, Zeeman effect of doubly ionised cerium, Ce III, A., I, 272.

Debrus, bleaching of animal and vegetable fibres, B., 1325.

De Bruyne, N. A., absorption of strain energy in metals, A., I, 291. Plastic materials for aircraft construction, B.,

Debuch, C. P., and Amer. Lurgi Corp., roasting, calcining, etc., (P.), B., 629.

De Buck, A., salivary and stomach secretion of Anopheles and other mosquitoes, A., III, 20Î.

Debye, P., determination of electrical and geometrical structure of molecules, A., I, 116. Investigation of free electrons in metals with the aid of X-rays, A., I, 224. Structure in electrolytic solutions, A., I, 516.

and Ramm, W., high-frequency loss and quasi-crystalline structure of liquids, A., I, 65.

De Camargo, T., and Vageler, P., problems of tropical and subtropical soil science, B., 1095.

De Carli, F., and Mangini, A., $\beta\beta\beta$ -tribromoethyl alcohol, A., II, 82.

De Caro, L., and Locatelli, A., vitamin-A, -B₁, and -B₂ content of raw and cooked yolk of hen's egg, A., III,

and Rovida, E., biological activity of isovitamin-C, A., III, 327. See also Scoz, G.

De Ceeco, S. See Berlingozzi, S.

De Cew, J. A., paper sizing, (P.), B., 537. Déchène, G., far ultra-violet emitted by electrical discharges in air at reduced pressure, A., I, 157.

Decherd, G., Herrmann, Georges, and Erhard, P., effect of myocardial destructive agents on creatine content of the rabbit's heart, A., III, 27.

Schwab, E. H., Herrmann, Georges, and Brown, W. O., creatine content of hypertrophied rabbit's heart, A., III,

See also Herrmann, Georges.

Dechigi, M., oxidation-reduction enzymes as a criterion of the quality of butter, B., 1123. Detection of addition of margarine to butter by colorimetric determination of peroxidases, B., 1123. and Torelli, L., influence of manganese on antibody formation, A., III, 5.

De Cissey, P., apparatus for drying wood, etc., (P.), B., 677.

Decker, J. W. See Holden, T. N.

Deckert, W., volumetric determination of ethylene oxide, B., 875. See also Schwarz, L.

De Clerck, J., measurement of turbidity in worts and beers, B., 485. Yeast troubles in brewing, B., 966. Air and beer, B.,

De Clercq, A., fluorescence phenomena on fats with the Hanau quartz lamp. I.,

De Coriolis, E. G., Moser, J. R., and Surface Combustion Corp., heat-treating furnace [for metals], (P.), B., 356.

Decostello, rapid staining with buffered Wright stain, A., III, 246.

Decourt, J., Guillaumin, C. O., and Sapin, variations in crythrocyte and plasma hydræmia and chloræmia after injection of mercurial diuretics, A., III, 4.

Deconx, L., Vanderwaeren, J., and Simon, M., phosphoric acid and the beet, B., 1104

De Degiorgi, A. C. See under Cannoni de Degiorgi, A.

Dědek, J., electrical conductivity of doughs, B., 78. Calcium salts in [bcet-]sugar juices, B., 605. Resistance of iron and brass evaporator tubes to the corrosive action of [sugar] juice, B., 1112.

Coutouly, M., and Schwarz, L., importance of control of filterability of turbid

[sugar] juices, B., 1109. and Ivančenko, D., filterability of defecated and of carbonatated [sugar] juices, B., 716. Determination of protein in sugar-beet juice by Folin and Wu's method, B., 1256. Following decomposition of protein in sugar-bect juice, B., 1256. Calcium sults in [beet-]sugar juices. II. Determination of carbon dioxide in sugar juices. III. Solubility products of calcium salts, B., 1392.

and Vasátko, J., improving the filterability of infected prelimed [beetsugar] juices, B., 1256.

Dedem, (Baron) G. W. von, chemical methods for separating petroleum emul-

sions, B., 1297.

Dedichen, J., standardisation of liver extracts, A., III, 301.

De Diesbach, H., and Dobbelman, T., benzoyl derivatives of indigotin. III., A., II, 78.

and Moser, E., benzoyl derivatives of indigotin. IV., A., II, 120.

De. Donder, T., velocity of a coupled

reaction, A., I, 568.

Dedusenko, L. S., cyclopentadiene in products of pyrolysis of paraffin products, B., 107.

Dee, T. P. See Brit. Celanese. De Eds, F. See Eddy, C. W.

Deel, H., effect of their origin on composition of certain eucalyptus oils, B., 287.

Deem, A. W., and Williams, C. L., fermentation reactions of Erysipclathrix rhusiopathia, A., III, 226.

Deemer, R. B., Martin, J. B., and Dawson, P. R., ammonium fluoride fusion: a rapid means of determining potassium in soils, B., 1249.

Deer, W. A., composition and paragenesis of biotites of the Carsphairn igneous complex, A., I, 334. Marginal rocks of the Cairnsmore of Carsphairn complex, A., 1, 587. Pegmatitic hornblende from the Carsphairn complex, A., I, 587.

Deere, C. J., Dulaney, A. D., and Michelson, I. D., utilisation of lactose by Escherichia coli mutabile, A., III, 35.

Deerr, N., theory of molasses formation, B., 961.

Deev, I. T. See Charin, A. N.

Defandorf, J. H., effect of p_H on determination of calcium in blood-scrumphosphomolybdic acid centrifugates, A., lll, 452.

De Fazi, R., and Pirrone, F., constitution of cholesterol. XIII. 13:18-Dimethyl-9:13 - cyclopenteno - 5:6 - dehydrohydrophenanthr-3-ol from cholesterol, A., II, 147. Indones. XIII. Chloro-derivatives of 3-phenyl-2-methylindone. XIV. Partial dehalogenation of the 2:3-dichloro-3-phenyl-2-methylhydrindone of m.p. 111-112°. XV. Chloro-derivatives of 3-phenyl-2-ethylindone, A., II, 153, 294, 378.

De Fériet, J. K., turbulence and the equations of thermal diffusion, B., 851. Deffenu, (Signa.) V. See Macciotta, E.

De Ficquelmont, A. M., constitution of inorganic rubber, A., I, 226. Mechanism of polymerisation of phosphonitrile chlorides (PNCl₂)_x, A., I, 321. De Florez, L. See Gray, J. W., and

Texas Co.

De Foe, O. K. See Poindexter, F. E.

De Fremery, P., Laqueur, E., Reichstein,
T., Spanhoff, R. W., and Uyldert, I. E., corticosterone, a crystallised compound with the biological activity of the adrenal-cortical hormone, A., II, 105.

and Scheygrond, B., inhibition of the gonadotropic activity of pregnancy urine extract by serum of rabbits injected with an extract of male urine,

A., III, 362. Sec also Reichstein, T.

De Fries, H. A., and Nitralloy Corp., metal [steel] article of precise dimensions, (P.), B., 580.

Degan, C., effect of glycine on production of creatine in the normal subject, A., III, 304.

See also Gradinesco, A.

Degea A.-G. (Auerges.), protective glass containing neodymium, (P.), B., 1053.

Deger, E. C., thermal springs in Central America, A., I, 481. Plants used by the Indians against snake venom and malaria, A., II, 511. Colour of cultivated soils of central America, B., 1095.

Degering, C. F., explosion hazards from the use of isopropyl and other ethers,

Degering, E. F., catalytic oxidation of carbohydrates and related compounds by oxygen in presence of iron pyro-phosphates. IV. Methyl alcohol, fermaldehyde, formic acid, sodium formate, ethyl alcohol, acetaldehyde, acetic acid, sodium acetate, glycol, glycollic acid, sodium glycollate, oxalic acid, and sodium oxalate, A., II, 178.

See also Boyd, T., and Padgett, A. R. Deggeller, O., jun., vitamin-C content of

blood, A., III, 45.

De Giacomi, R., detection of citric acid, tartaric acid, and cream of tartar in

presence of sugar, B., 1308.

Degiorgi, (Mme.) H., and Zappi, E. V.,
new aromatic fluorine derivatives, A.,

II. 495.

De Girves, J. M., simple and rapid methods for analysing industrial calcium tartrato

and wine lees, B., 1116.

Degkwitz, R., Cadenbach, G., and Lapp, H., susceptibility of particles of hydrophobic organic materials in hydrosols and suspensions to change of size and shape, A., I, 239.

De Goloubinoff, V., differential geochemical prospection of mineral deposits, A., I, 382.

De Graaff, W. C., viscosity measurements on S- and R-forms of B. pneumonia, A., III, 99.

De Graeve, P., development of purincnitrogen during germination, A., III, $159, \bar{2}40.$

De Grailly, R. See Sabrazès, J.

De Groot, W., natural system of elements from viewpoint of nuclear physics, A.,

De Groote, M., Keiser, B., and Tretolite Co., oxidation products of castor oil, etc., (P.), B., 58. Sulpho-aromatic derivatives of hendecenoic [undecenoic] acid, (P.), B., 651.

De Groote, M., Keiser, B., Wirtel, A. F., and Tretolite Co., breaking petroleum emulsions, (P.), B., 321. Polyketo-

fatty acid bodies, (P.), B., 418. and Tretolite Co., increasing the productivity of wells, (P.), B., 635, 1160. Breaking of petroleum emulsions, (P.), B., 1163.

De Groote, P., heat losses through walls of glass furnaces of the hearth type, B.,

De Guevara, J., and López, J., determination of silver in some pharmaceutical preparations, B., 286.

Deguide, C., treatment of silicate ores [zircon], (P.), B., 438.

De Guillebon, Lemoigne, M., and Dupic, H., broad-making trials on the wheat crop at Cambrésis in 1936, B., 1398.

Déguillon, F. See Médard, L. De Gyulay, O. S. See Micheli, L. I. A.

De Haan, I., ion action and permeability to water: concervate theory of the plasma membrane, A., III, 21.

De Haan, K., influence of heavy nitrogenous manuring on sugar beet, B., 958.

De Haas, J. J., spreading and the electric potential at surfaces, A., I, 612.

De Haas, W. J., and Berg, G. J. van den, minimum in the resistance-temper-

ature curve of gold, A., I, 504.
and Biermasz, T., thermal conductivity
of potassium bromide, potassium
chloride, and silica at low temperatures, A., I, 506.

and Engelkes, (Miss) A. D., disturbance of superconductive state by a magnetic field; supplementary measurements, A., I, 292.

Engelkes, (Miss) A. D., and Guinau, O. A., gradual penetration of a magnetic field into a superconductive

sphere, A., I, 451. Gerritsen, A. N., and Capel, W. H., thermal resistance of bismuth single erystals at low temperatures, and in a magnetic field, A., I, 70.

See also Becquerel, J.

Dehalu, (Miss) F., the system of bands ${}^{2}\Sigma - {}^{2}\Sigma$ of the molecule AlO and astrophysical applications, A., I, 547. See also Bodson, (Miss) E.

Dehasse, C., hardening of steel by surface treatment with oxyacetylene, B., 1213.

De Hemptinne, M., and Delfosse, J. M., Raman spectra of light and heavy phosphine and arsine, A., I, 62 Jungers, J., and Delfosse, J. M., Raman

spectra of deuterethylenes, A., I, 549. Savard, J., and Capron, P., energy of dissociation of the molecule of carbon monoxide, A., I, 279.

and Wouters, J., geometrical constitution of silicochloroform, A., I, 14.

See also Capron, P., Savard, J., and Wouters, J.

Dehlinger, U., transformation of solid metal phases. VI. Allotropic transformation, A., I, 291. Deformation sensitivity of metallic structures, A.,

I, 351. See also Bumm, H. Dehnert, H. See Scholl, R. De Hoffmann, C. See Mertens, E.

Dehove, R., and Dessirier, L., determination of diacetyl in butter, B., 1262. Dehryng, B. See Dombrowski, S. Deichmann-Grübler, W., and Myers, V. C.,

diastase therapy in diabetes mellitus, A., III, 13.

Deighton, T., fasting metabolism of various breeds of hog. III. Metabolism and surface area, A., III, 343.

Deile, H., artificial wool, B., 423.

Deile, O., rotation isotope effect in band spectrum of cadmium hydride-deuteride, Ā., I, 547.

Deimel, L. See Pollak, L. Deinet, J. See Du Pont de Nemonrs & Co., $E.\ I.$

Deiss, E., behaviour of perchloric acid in analytical work; precautionary rules, A., I, 46. Damage to zinc guttering and plates by bituminous roofing felt, B., 40.

Deitz, V. See Buswell, A. M., and Copley, M.J.

De Jaer, A. See Dony-Hénault, O. De Jahn, F. W., and Bower, F. A., nitric acid, (P.), B., 35.

Dejarme, N., pyrometers and thermometers for [use in moulding] modern materials, B., 943.

See also Delorme, J. Dejean, P., interpretation of the eutectoid

diagram Fe-Fe₃C, A., I, 357.

De Jesus, P. I., physicochemical factors in anopheline ecology. I. Nitrogen. II. Turbidity, chloride, and iron, A., III, 474; B., 93.

and Ramos, J. M., effect of filtration on sanitary quality of water of metropolitan water district [of Manila], B.,

De Jong, A., and Leeming, J. H. J., furnaces, (P.), B., 300.

De Jong, A. W. K., properties of the

ecgonines and their esters. I. and II. III. aß-Position of the double linking in ecgonidine; the structural formulæ and autoracemisation of the ecgonines, A., II, 216, 355.

De Jong, H. G. B., concervation, A., I, 565. and Holleman, L. W. J., stable unmixing in binary systems: salt+water, A.,

and Saubert, G. G. P., complex floceulation of the type, colloid zwitterion+ cation + anion, A., I, 29. Complex-flocculation and -coacervation of the type, colloid zwitterion+colloid anion +crystalloid cation, A., I, 29. Phosphatide auto-complex coacervates as ionic systems and their relation to the protoplasmic membrane. II., A., I, 302. Models for stimulation of the organ of smell, A., III, 263.

and Winkler, K. C., separation in crystalloidal neutral salt solutions, analogous to complex coacervation of biocolloid

sols, A., I, 305. and Zijp, L. T. van, demixing in aqueous salt solutions, A., I, 75.

See also Holleman, L. W. J.

De Jong, J. C., determination of iodine in thyroid gland, A., III, 455. Determination of iodine in meditrene, iodohydroxyquinolinesulphonic acid, and chloroiodohydroxyquinoline, B., 839.

De Jong, L. E. den D. See Weil, A. J. De Jong, S., bisulphite-binding capacity of blood of pigeons with [vitamin-] B_1 deficiency, A., III, 103. and Picard, J., determination of pyruvic

acid in small quantities of blood, A., III, 372.

De Jong, W. F., and De Lange, J. J., X-ray study of pucherite, A., I, 204. De Keyser, W. L., kaolin and clay, A., I,

Dekker, P., analysis of rubber. I. Determinations of water-soluble constituents in rubber. II. Qualitative determination of scrum constituents in raw and vulcanised rubber, B., 473, 949.

De Kok, W. J. C. See Waterman,

De la Bernardie, A. M. See Terroine, E. F.De la Borbolla, J. R. See Rodriguez Velasco, J.

Delaby, \hat{R} ., $\beta \gamma$ -ethylenic nitriles and their derivatives, A., II, 90. Diels-Alder diene synthesis, A., II, 273. β-Heptyl- and β -nonyl-acraldehydes, A., II, 275. Sex hormones: their relationships with cholesterol, A., II, 376.

and Lecomte, J., infra-red absorption spectra and ethylenic compounds. I. General; ethylenic alcohols. II. β -Allyl bromide homologues and ethylenic nitriles. III. $\beta\gamma$ -Ethylenic acids and γ -lactones, Λ ., I, 282, 394. See also Lecomte, J.

Delachaux, C. L., and Aciéries de Genne-villiers Anc. Établ. Delachaux, heat-treating welded-steel parts [e.g., rails], (P.), B., 580.

De la Cierva, P., emission of neutrons by minerals, A., I, 161.
and Rivoir, L., chemical analysis by
X-rays. I., A., I, 200.

See also Palacios, J.

Delacrausaz, R., measurement of Thomson effect, A., I, 231.

Delacroix, G. A. See Delot, M. H. V.

Delafield, P. A., injection moulding of thermoplastic compounds, B., 466.

Delage, \hat{B} ., lipin-protein combination in blood-serum; analysis of physicochemical factors of extraetability of serum-lipins by ether in presence of various substances, A., III, 3. Extractability of scrum-lipins by ether as a function of p_H , A., III, 3.

Delamere, R. D., Williams, V. G., and Grange, E. R., apparatus for treating gases with liquids, particularly air with

water, (P.), B., 512.

Delaney, M. E., and Halowax Corp., fire-resistant [insulated] electrical conductor, (P.), B., 255.

De Langavant, C., corrections to be applied in heat of hydration tests [on cement

mortars], B., 40.

De Lange, J. J. See De Jong, W. F.

Delange, R., and Fabr. de Prod. de
Chimie Organique de Laire, alkalineearth metal aurothioglycollates, (P.), B., 980.

De Langhe, J. E., general theory of blackening curve of a photographic material, A., I, 39. Theory of photographic developability, B., 90. Theory of deviations from the reciprocity law

[in photography], B., 982.

Delaplace, R., thermal conductivity of saturated gaseous hydrocarbons at low pressure, A., I, 125. Thermal conductivity of unsaturated gaseous hydrocarbons at low pressure, A., I, 176. Vapour tension of saturated and unsaturated gaseous hydrocarbons at Iow temperatures, A., I, 231. Vapour pressures of saturated gaseous hydrocarbons at low temperatures in presence of silica gel, A., I, 453. Analysis of saturated and unsaturated gaseous hydrocarbons at very low pressure, A., 1Ĭ, 223.

De Lapparent, J., activatable kaolinites, A., I, 383. Mineralogical nature of clays of El Golea (Sahara), A., I, 484. Emery of Samos, A., I, 587. Mineral-ogical characteristics of smeetites; application to the determination of some fuller's earths susceptible of use as decolorising earths, B., 340.

De Lapparent, P. See Feytaud.

De Larambergue, R., production of cyan-amide by ammoniacal oxidation of fructose, arabinose, glycerol, A., II, 329. mannitol, \mathbf{and}

La Roza Corporation, digestion of fibrous or cellular material, (P.), B.,

Delarozière, F., electrical purification of gas and its application in the gas industry, B., 1295.

and Duhamel, J., benzol recovery by active carbon, B., 1295.

De la Serna, C. S. See Canepa, D. R. Delassus, and Laffond, use of rotenone powders against grape moths, B., 714. Use of rotenone dusts against Eudemis, B., 1390.

De Lassus St. Genies, A. H. J., photography in relief, with or without colour, (P.), B., 91.

De Lattre, P., apparatus for accelerated crystallisation, (P.), B., 307.

Delaunay, H., and Accoyer, P., utilisation of glycerol by normal and phosphoruspoisoned rats, A., III, 20.

Delauney, P., action of phenolic substances on bacteria; influence of chemical constitution. I. Salicylic acid and alcohol, salicylaldehyde, and their monoand di-halogeno-derivatives. II. Effect of salicylic acid, salicylaldehyde, and saligenin and their mono- and di-halogen derivatives. III. Effect of salicylic acid, salicylaldehyde and alcohol, and of their mono- and di-halogeno-derivatives. A., III, 183, 359, 435.

De Laval Separator Co. See Beskow, S. Forsberg, E. A., Stigen, A. L., and

Strezynski, G. J.

Delavault, R., action of carbon dioxide and of carbon monoxide on compact magnesium at high temperatures, A., I, 92. Oxidation of magnesium in the liquid state, A., I, 146.

Del Campo, A., Burriel, F., and Escolar, L. G., photo-electric determination [of

barium and sulphate], A., I, 199.

Deleano, N. T., and Dick, J., chlorophyll content of foliage of diccious plants, A., III, 191. Carotene metabolism of leaves during the whole vegetative cycle, A., III, 329.

Popovici, N., and Ionesco, I., plant catalase, A., III, 353.

and Ullmann, L., action of alcohols on catalase, A., III, 311.

De Leenheer, L., blackish-grey chrysocolla, A., I, 334.

De Leeuw, A. J. See Hermans, P. H. De Lempdes, R., new applications of the oxy-acetylene flame to metallurgical practice, B., 930.

De Lenchere, R. L. Sec Stolk, D. van.

Deleonardi, S., hyper-tensive and glycæmie action of hypertensive cerebrospinal fluid injected into dogs after suppression of pressor-receptor nerves, A., III,

Delépine, M., supposed transformation of dihydroxydihydro-a-campholenic acid into pinonic acid, A., II, 345.

Delépine, M., transformation of a given active pinenc into two compounds of inverse optical activity (carvones), A., II, 508.

and Hanegraaff, C., catalytic hydrogenation of cinnamaldehyde and citron-

ellal, A., II, 421.

and Horeau, A., catalysis of Cannizzaro's reaction by active nickel and platinum; application to aldoses, A., II,

Delfosse, J. M., Jungers, J. C., Lemaitre, G., Tchang, Y. L., and Manneback, C., Raman spectrum of deuterethylene, A., I, 443.

See also De Hemptinne, M.

Del Fresno, C., and Aguado, A., bromopotentiometric determination of thalfium with chloramine-T, A., I, 199. Bromopotentiometric titration of thallium with chloroamine, A., I, 476.

and Valdés, L., potentiometric study of reaction between solutions of halogens and sodium thiosulphate, A., I, 197.

Del Giudice, G. R. M. See Taggart, A. F. Delimarski, J. K., and Dolgova, E., production of zcolites by the wet method, B., 541.

and Izbekov, V. A., determination of individual potentials of metals dissolved in aluminium bromide, A., I, 187.

Zinkova, Z., and Goldman, G., permutits from kaolin, B., 541.

De Lisi, G., action of folliculin and anterior pituitary extracts on gastric secretion, A., III, 491.

De Lisle, F. A., Fowler, W. R. T., Lovell, E. L., and Ure, W., thermal decomposition of crotonaldehyde, A., II, 50.

Della Santa, P. See Nasini, A. G. Della Vida, B. L. See Pisa, M.

Dellepiane, G. B., soap industry and its modern development, B., 942.

Delmonte, J., metals in vacuum tubes, B., 927. Imperfections on plastic surfaces, B., 1083. New uses for transparent resins, B., 1370.

Del Mundo, S., Philippine bagasse ash as raw material for glass-making, B., 344.

Deloffre, G., effect of toxic salts on regeneration of nucleus in the lupin, A., III, 189. Effect of toxic salts on the degradation of nucleus through inanition in the lupin, A., III, 243. DeLong, W. A. See Johnson, J. C.

Delor, J. See Gley, P.

Delorme, G. See Riou, P.
Delorme, J., choice of dyes for plastic materials, B., 588.

and Dejarme, N., importance of water purification in the plastics industry, B., 1083.

Delot, M. H. V., and Delacroix, G. A., construction of crucible ovens for glass and other industries, (P.), B., 509.

De Loureiro, J. A. See Grabar, P.
Delphaut, J. See Mercier, F.
Delrue, G. See Schockaert, J. A.
Delsasso, L. A., Fowler, W. A., and
Lauritsen, C. C., energy and absorption of the γ -radiation from 7 Li+ 1 H, A., I, 212. γ-Radiation from fluorine bombarded with protons, A., I, 212.

See also Bonner, T. W., and Crane, H. R.

Delsol, R., control of benzol-recovery plant; direct determination of benzoI in gas by means of the photoelectric cell, B., 106.

De Lucia, P., and Claar, E., fructosæmia in hepatic disturbances, A., III, 113.

DeLury, J. S., heterogeneity of parent magma, A., I, 587.

Delvaux, E., determination of oleic, linoleic, and linolenic acids in mixtures, A., II, 397.

Delwaulle, (Mlle.) M. L. See Francois, F. Dely, J. G., and Chem. Construction Corp., regeneration of copper-ammonia solutions used to absorb carbon oxides and oxygen [from gases used in ammonia synthesis], (P.), B., 1201.

Delyannis, A. A., Greek bauxite and its decomposition, B., 904.

Demag-Elektrostahl Ges.m.b.H., apparatus for charging [are] furnaces, (P.), B.,

Demanche, R., Laroche, G., and Simonnet, H., anti-gonadotropic sera, A., III, 294. Fixation of the complement reaction and blood-antihormones, A.,

and Levy-Bruhl, M., fixation of the complement in streptococcic infec-

tions, A., III, 251.

Demann, W., hard coumarone resins from liquid acid resins obtained in washing benzol with dilute sulphuric acid, B., 589. Improvements in the [benzol] wash-oil process, B., 1155.

and Brösse, W., increasing the benzol yield from coke ovens with roof chan-

nels, B., 638.

Demant, V. See Feigl, F.

De Marco, R., amylolytic activity of saliva in dogs, A., III, 377. Amylolytic activity of extracts of the salivary glands of octopods, A., III, 458.

Demassieux, (Mme.) N., and Federoff, B.,

dehydration of copper potassium sul-

phate, A., I, 575.

and Roger, L., complex formed by lead iodide and lithium iodide in aqueous

solution, A., I, 412. De Mauny, H. C. See Marceron, L.

Demay, M. See Tuchmann, H.

De Mayolo, S. A., electronic charge e and the materialisation of the photon, A., I,

Demco Library Supplies, Inc. See Jones,

De Meio, R. H., oxidation-reduction mechanism in the [living] cell, A., III, 172. De Mello, J. B., determination of chole-

sterol in blood, A., III, 451.

Dementieva, M. I., Frost, A. V., and Serebrjakova, E. K., equilibrium dehydrogenation of n-butylenes to butadiene, $n \cdot C_1H_8 \rightleftharpoons C_4H_6 + H_2$, A., I, 411.

De Mers, C. D., value of automatic temperature control in production of ground-

wood pulp, B., 894.

Demeter, K. J., Löweneck, M., and Miller, M., simplification of plate-count method for bacteria in milk, B., 79.

Demeure, F. See Bredt, J.
Demianov, N. J., and Telnov, S. M.,
preparation of cyclobutanone, A., II,
502.

Demidenko, D. A. See Kuznetzov, V. D.

Demidenko, S. G. See Skarre, O. K. Demidenko, T. T., iron in nutrition of

higher plants, A., III, 328. and Golle, V. P., influence of light on inflow of nutrient substances in plants, A., III, 365.

Kulkes, A. A., and Popov, V. P., colloids in [sugar] beet in relation to liming of the soil, B., 73. Demidenko, T. T., and Martinov, N. P., effect of osmotic pressure of soil solution on yield and composition of sugar beet, B., 1104.

and Timofeeva, E. F., rôle of straw as a source of carbohydrate for nodule bacteria, B., 599. Influence of nodule bacteria and Azotobacter on yield of leguminous and cereal plants sown together, B., 599. Azotobacter as a source of nitrogenous nourishment for higher plants, B., 600.

Demin, V. I., preservation of vitamin-C in

dried vegetables, A., III, 45.

Deming, G. W., new beet laboratory apparatus, B., 275. Electrically controlled pipette, B., 275. Tempering water-bath, B., 275.

Deming, (Miss) L. S. See Maxwell, L. R. De Mira, M. F., and Da Cruz, A., phosphorus compounds in muscles of adrenal-

ectomised rabbits, A., III, 319.

Demjanova, N. M. See Mokruschin, S. G.

Demkovski, P. See Illarionov, V. V.

Demmelmair, A. See Hess, V. F. Demmler, A. W. See Strauss, J.

Demolon, A., nitrogen fertilisers and nitrogen content of [wheat] grain, B., 821. and Bastisse, E., formation of argillaceous colloids in spontaneous change of granite in a lysimeter cell, A., I, 52. Mobilisation of soil nitrogen and

mineral reserve, B., 1098. and Burgevin, H., preparation of artificial manure, B., 1385.

and Dunez, A., bacteriophage and fatigue

in lucerne soils, B., 1252. De Montigny, R., and Maass, O., physico-

chemical factors which influence sulphite [pulp] cooking, B., 26.

Demory, P., and Drouineau, G., white and red silty soils, B., 702.

De Motte, M. P. See Linde Air Products Co. Demougin, P., adsorption in the gaseous phase, A., I, 510. Manufacture and applications of active carbons, B., 1153. and Landon, M., influence of calcium carbonate and acids on stabilisation of

nitrocellulose, B., 1280. Dempsey, (Miss) M., and Robertson, (Miss)

M. E., sarcoptic mange in goat skins; correlation of disease in the living animal with faults in the finished leather, B., 816.

Dempster, A. J., electric and magnetic focussing in mass spectroscopy, A., I, 152. Isotopic constitution of neodymium, A., I, 210.

Denekamp, P. J., and Kruyt, H. R., dielectric measurements with hydrophilic colloids. I. Measurements with agar and gelatin at 261 m., A., I, 615.

Dengel, F. See Braun, J. von.
Denham, H. G., cobalt—an essential element, A., III, 255.

De Niederhäusern, A., creatinine, blood-sugar, and basal metabolism of soldiers, A., III, 380.

and Ferrarini, E., photometric determination of iron in blood and tissues by sulphosalicylic acid, A., III, 448.

Denig, F. See Koppers Co. of Delaware. Deniges, G., identity reactions, of a microchemical order, of tellurium, A., I, 374. Micro-crystal reaction of glycine, A., II, Detection and colorimetric determination of glycine with the alloxan reagent, A., II, 89. Microchemistry of methylxanthides; (caffeine, theobromine, theophylline), A., II, 314. Analysis of dog milk, A., III, 169. Dening, K., adulteration of black pepper fruit, B., 283.

Denis, P., new alkaloid from the Rubiaceæ; rubradinine, A., II, 266. See also Courtois, Jean.

Denisenko, J. I., phenylcyclopentylmethane and cyclopentylcyclohexylmethane in relation to catalytic hydrogenation, A., II, 54. Phenylcyclopentylethane and cyclopentylcyclohexylethane, A., II, 181. Phenylcyclopentylpropane and cyclopentylcyclohexylpropane, A., II, 181.

Denison, I. A., electrolytic measurement of

corrosiveness of soils, B., 70.

Denisov, E. I., potentiometric determination of sulphuric and persulphuric acids and hydrogen peroxide when present together, A., I, 261.

Denisov, G. M. See Michailov-Micheev, P. B.

Denisovitsch, B. P., comparison of efficiencies of activated charcoal, B., 746.

Denley, P. G. See Bruce, R. J. Denneen, F. S., and Dunn, W. C., heattreatment of metal articles [steel crankshafts], (P.), B., 1225. Electric heating apparatus for use in surface-hardening of articles, (P.), B., 1230. [Apparatus for] surface hardening of articles [shafts,

etc.], (P.), B., 1362. Dennett, J. H., and Georgi, C. D. V., nitrogen: potash ratio of oil-palm leaf-

lets, B., 710.

Dennig, H., increase of body-activity by artificially induced changes in acid-base equilibrium, A., III, 308.

Denning, P. S., and Schundler & Co., F. E., expanded vermiculite, (P.), B., 239. Separation of foreign matter from vermiculite, (P.), B., 1337.

Denninger, E., influence of various clays on physical properties of grinding-wheel bonds, B., 1050.

Dennington, A. R., effecting sterilisation by

radiation, B., 801.

Dennis, R. W. G. See O'Brien, D. G.

Dennison, D. M. See Randall, H. M.

Dennison, M. See Korenchevsky, V.

Dennison Manufacturing Co., paper similar sheet material, (P.), B., 1193.

See also Asnes, B., and Kallander, E. L. Denny, E. H. See Ellis, R. W. Denny, F. E., spring treatment of autumn-

harvested gladiolus cormels, B., 958. Retrial of the ethylene chlorohydrin method for hastening the germination of freshly-harvested gladiolus corms, B.,

Den Otter, H. P., derivatives of oxidation

products of glycerol, A., II, 225.

Densem, N. E., determination of iron in glass, B., 138.

Denslow, R. R. See Brizzolara, A. A. Dent, C. E. See Barrett, P. A., and

Imperial Chem. Industries. Dent, F. J., Blackburn, W. H., Williams, N. H., and Millett, H. C., use of oxygen and high pressure in complete gasification. I. Gasification with oxygen,

B., 9. Denyes, R. O. Sec Noller, C. R.

Deonier, C. C. See Richardson, C. H. Depardon, L., and Buron, P., fixing the

date of vintage, B., 830. Department of Scientific & Industrial Research, detection of toxic gases in

industry; hydrogen sulphide, B., 846.
Fuel Research, Northumberland and
Durham coalfield. Beaumont seam. I. Northumberland area, B., 309.

Department of Scientific & Industrial Research, Fuel Research, Yorkshire, Nottinghamshire, and Derbyshire coal-field. Nottinghamshire and Derbyshire area; analysis of commercial grades of coal, B., 403. Report of test by Director on the carbonising plant of Coal and Allied Industries, Ltd., at Seaham Harbour, County Durham, B., 637. Yorkshire, Nottinghamshire, and Derbyshire coalfield; West Yorkshire area; Wheatley Lime Seam, B., 858. Coal seams of North Staffordshire, B., 858.

De Pauw, P., heat of combustion of smokeless powder, B., 502. Calculation of combustion temperature of smokeless

powder, B., 733.

De Pava, A. V. See Canneri, G.
Depaw, H. A., and Amer. Zinc, Lead &
Smelting Co., treatment of zinc sulphide or zinc oxide pigment, (P.), B., 159. Apparatus for treatment of pigments, (P.), B., 159. and New Jersey Zinc Co., zinc oxide [for rubber filler], (P.), B., 667.

De Phily, F., amalgamation under surface tension, B., 685. Apparatus for amalgamation of ores, (P.), B., 1227. See also White, Hughes & Co.

Depierre, F. See Nitti, F.
Deplanque, R., process-water in the distillery, B., 720.

and Bnse, R., storage and valuation of potato[-distillery] wash, B., 838. See also Lampe, B.

De Ponte, G. See Szegő, L.

De Porcellinis, G. See Internat. Latex Processes.

Deppe, M. See Windaus, A.

De Puy, C. A., prolonged analgesia in malignancies, A., III, 25.

De Quant, J. C. See Verkade, P. E. Dequer, J. H., device for milling and

separating ores, (P.), B., 3.

De Ravignon, A. F., corrosive action of scrubber water on [varnish] coatings,

Deravlev, A. I., importance of cystine for the growth of fur of rabbits, A., III, 383. Derby, I. H., Horner, H. R., and Reilly, P. C., apparatus for treating carbonaceous material, (P.), B., 207. Forming charges, (P.), B., 207. Treating carbonaceous material, (P.), B., 207. and Reilly, P. C., impregnating pitch and product utilising it, (P.), B., 15.

Derby, R. L., testing and significance of

boron in water, B., 193.

Derbyshire, J. A., scurf formation in continuous vertical retorts, B., 199. Dereganskaja, A. See Ginzburg, Z.

De Rewal, F. J., and Atmospheric Nitrogen Corp., catalyst and process for decomposition of hydrocarbons, (P.), B., 113.

De Reytere, R., casting of [steel] ingots, (P.), B., 248.

Derge, G., size of nuclei in solid metal reactions, A., I. 399.

and Kommel, A. R., structures of meteoric irons, A., I, 585. See also Mehl, R. F.

Deribas, D. See Spanier, P. Déribéré, M., use of certain naphthols as fluorescent indicators, A., I, 43. Control of $r_{\rm H}$ in [sugar] practice, B., 1393. Deringer, H., quality and preparation of

coke, B., 104.

De Ritis, F. See Francaviglia, A. Derjabina, N. V. See Achumov, E. I.

Derjaguin, B., derivation of certain thermodynamic relations; a generalised equation of sorption and a new equation of electrocapillarity, A., I, 138.

and Kusakov, M., properties of thin liquid layers and their influence on interaction with solid surfaces, A.,

and Lazarev, V., new friction law, its experimental test, and its application to friction of mineral dispersoids, A., I, 237.

Leonteva, A.A., and Volarovitsch, M.P., modulus of rigidity of vitreous systems in the softening range, B.,

See also Volarovitsch, M. P.

Dermer, L. See Fiessinger, N. Dermer, O. C. See Dermer, V. II. Dermer, V. H., and Dermer, O. C., physical constants of morpholine, A., II, 434.

Dernbach, W., hormones and hormone preparations, B., 1131.

De Robertis, E., and Resta, L. S., rôle of the Kupffer cells and liver cells [of the toad] in elimination of vital dyes, A., III, 134.

De Rosen, P. See Jansen, L.

Derr, R. B., Riesmeyer, A. H., and Unangst, R. B., removal of undesirable constituents from tobacco smoke, B., 1132.

See also Aluminum Co. of America. Derrett-Smith, D. A., portable ultraviolet fluorescence lamp for examination of textile and other materials, B., 801.

Derrien, Y., does the blood-cerebrospinal fluid equilibrium obey Donnan's or Derrien's law? A., III, 54. Nature of cerebrospinal fluid, A., III, 297.

Jayle, G., and Frizet, P., biological phenomena of membranes; distribution of sodium chloride and glucose between plasma and aqueous humour, A., III, 291.

Derris, Inc. See Wotherspoon, R.

Dervichian, D. G., unimolecular layers. II. Direct registration of the electric effect of unimolecular layers, A., I, 301. Direct registration of variations of superficial pressure as a function of the surface and temperature (unimolecular layers), A., I, 429.

and Joly, Maurice, viscosity of unimolecular surface layers, A., I, 358.

and O'Ceallaigh, C., unimolecular layers. I. Use of an electrometric valve for measurement of variations in the air-liquid contact potential, A., I, 301.

Dervillée, P. See Sabrazès, J. Derviz, G. See Gelman, I.

Der Weduwen, A. J., industrial chemicaldefence preparations, B., 503. Protecting the individual from gas, B., 504.

De Rycker, H., mode of penetration of nitrogen into ferrite and its hardening effect, B., 919.

De Sacy, D. See Nérot, G., and Quéret, Y. Desai, B. N., Liesegang rings and influence of media in their formation, A., I, 410. See also Acharya, B. N., Joshi, C. B., Khanolkar, R. R., and Mankodi, G. F.

Desai, K., and Cox, S., yield of Cheddar cheese in relation to fat percentage in

milk, B., 613.

Desai, M. C., effect of certain nutrient deficiencies on stomatal behaviour, A., 111, 499.

Desai, R. D., and Hamid, S. A., heterocyclic compounds. IV. Coumarins from resacetophenone and ethyl acetoacetate and synthesis of coumarino-

 γ -pyrones, A., II, 512. Hunter, R. F., and Hussain, M., isomerio 2-arylamino-2-cyano-trans - decahydronaphthalenes, and condensation of the cyanohydrin of 3-methylcyclopentan.

one with aniline, A., II, 12. Hunter, R. F., and Kureishy, M. A., unsaturated and tautomeric mobility of heterocyclic compounds. VIII. β-Naphthathiazole, 5:6:7:8-tetrahydro-βnaphthathiazole, and 5-phenylbenzthiazolo derivatives, A., II, 37.

Hunter, R. F., and Saharia, G. S., isomerism of derivatives of cyclohexane,

A., II, 290.

and Wali, M. A., synthesis of cyclohexanespirocyclopentane, A., II, 192. Condensation of succinic anhydride with α - and β -naphthyl methyl esters, A., II, 194. Dihydroresoreinols. IV. Condensation of phenyldihydroresorc-inol with aromatic aldehydes, A., II, 198.

See also Ahmad, S. Z., and Ali, A. Desai, S. V., and Fazal-nd-Din, photochemical oxidation of plant materials, A., III, 80. Nature of nitrification in soil, B., 268.

De Samsonow, E. C. A., laminated wood,

(P.), B., 1347.

Desanti, E. See Malméjac, J.

Desantis, F. J., and Lynn, E. V., American mistletoe, A., III, 246.

Desbrosse, G. See Dumanois, P.

Desch, C. H., magnesium alloys for aircraft, B., 450. Physical factors in the casting of metals, B., 929. Age-hardening alloys, B., 1356.

Deschalit, G., Donetz basin cokes, B., 198. Catalytic cracking of heavy fraction of peat generator tar and subsequent preparation of formaldehyde from the cracking gases, B., 203. Increasing the aromatic hydrocarbon content of coaldistillation gases (coke and semicoke) by pyrolysis of their hydrocarbon constituents, B., 1155.

and Prosvirnina, N., determination of carbon modifications—graphite and amorphous carbon—in coke, B., 514. Characteristics of macrostructure and

extent of fissuring of coke, B., 638.

Deschalit, N. M., Vassiliev, P. S., and
Rabinovitsch, A. L., reversible nickel electrode and its applications to study of colloidal solutions, A., I, 32.

Deschaseaux, R., differential reactions of colloidal silver preparations, B., 286.

Deschaux, F., examination of solvents for nitrocellulose, B., 945. Descombe, $J_{\cdot,\cdot}$ condensation of ketones with

formaldehyde in alkaline media, A., II, 50. Deshin, M. P., determination of manganese in ores, B., 573.

Deshommes, W. See Wuyts, H. Deshusses, J., analysis of colouring matters [in foods], B., 1127.

De Silveira, J. C., Barbadoes nut in Cape Verde Islands, B., 807.

De Simo, M. See Bataafsche Petroleum

Maats., and Shell Development Co. Desirant, M. See Crespin, D. Desnnelle, P. See Kuhn, R.

De Sousa, L. A. See Prasad, M. De Spirlet, X., roasting furnaces, (P.), B.,

Desreux, V. See Dupont, G. Desse. See Mariller, C.

Dessirier, L. See Dehove, R. Destouches, J. L., generalisation of the Lorentz transformation for a system of corpuscles, A., I, 7. Interaction of two particles in relativistic wave mechanics, A., I, 492.

Destrée, P., action of carbamylcholine chloride on gastric secretion, A., III, 178. Destriau, G., effects of electric field on phosphorescent sulphides, A., I, 283. Action of electric field on photoluminescent compounds; superluminescent and extinction effects, A., I, 395. Analysis

of the conditions of excitation of electrophotoluminescent phenomena, A., I, 550. De Stubner, E., coloured soluble cellulose,

Desveaux, R. See Lemoigne, M.

(P.), B., 333.

Detel Products, Ltd. See Teague, F. C. D. De Toni, G., photochemical processes in biology. I. Principal photochemical reactions and their reaction mechanisms, A., III, 80.

Detracolor, Ltd. See Allison, D. K., and Dieterich, $L.\ M.$

De Traverse, P. See Rathery, F.

Detrick, S. R. See Du Pont de Nemours & Co., E. I.

Detrick Co., M. H., furnace construction, (P.), B., 855.

Detroit Electric Furnace Co. See Crosby, E.L.Detroit Moulding Corporation. See Shaw,

C. P.Dettmar, G., storing and giving up of heat,

(P.), B., 510. Dettmer, F., tunnel kilns with shorter times of travel, B., 1048.

Dettwyler, W. See Du Pont de Nemours & Co., E. I.

De Turk, E. E., Bauer, F. C., Snider, H. J., Sears, O. H., and Allison, L. E., lack of potassium causes low maize yields, B., 1386.

Detwiler, S. R., and Zwemer, R. L., nature of so-called droplets found between the rod outer segments of vertebrate eyes, A., III, 201.

Deuber, C. G., effects of pruning roots of gas-injured trees, A., III, 243. Effects on trees of illuminating gas in the soil, B., 70.

Deuel, H. J., jun., Butts, J. S., Blunden, H., Cutler, C. H., and Knott, L. [with Goodwin, W., Gould, C., Hallman, L. F., Heller, R., and Murray, S.], ketosis. IX. Glycogen formation from various purified and natural fats, A., III, 92. Butts, J. S., Hallman, L. F., Murray, S.,

and Blunden, H., sexual variation in carbohydrate metabolism. IX. Effect of age or sex difference in content of liver-glycogen, A., III, 345.

Hallman, L. F., Butts, J. S., and Murray, S., ketosis. VIII. Oxidation of ethyl esters of fatty acids, A., III, 62.

Hallman, L. F., and Murray, S., ketosis. XI. Relation of fatty livers to fasting ketonuria in the rat, A., III, 306.

Hallman, L. F., Murray, S., and Samuels, L. T., sexual variation in carbohydrate metabolism. VIII. Rate of absorption of glucose and of glycogen formation in normal and adrenal ectomised rats, A., III, 345.

Murray, S., Hallman, L. F., and Tyler, D. B., ketosis. XII. Effect of choline on ketonuria of fasting rats following a high-fat diet, A., III, 385.

See also Butts, J. S., and Milhorat, A. T.

Deulofeu, V., amino-acids. IX. Condensation of resorcylaldehyde with hippuric acid; 2:4-dihydroxyphenylalanine, A., II, 19.

See also Biasotti, A., and Guerrero, T. H. D'Eustachio, D., isotope shifts in Li 1, A.,

Deuticke, H. J., and Ebbecke, U., chemical processes during contraction of muscle

under high pressure, A., III, 261. Deutsch, H., Reed, C. I., and Struck, H. C. rôle of thyroid in calorigenic action of vitamin-D, A., III, 279.

Deutsch, N. L., flame-proofing of fabrics,

Deutsch, W., and Raper, H. S., respiration and functional activity, A., III, 126.

Deutsch-Renner, H., taste of natural salts in bread, B., 487. Perception of scent in flour and baked goods, B., 721.

Deutschbein, O., and Tomaschek, R., fluorescence of rare earths in solution. I., A., I, 346.

Deutschberger, E. See Raudnitz, H. Deutsche Bekleidungsindustric G.m.b.H., artificial filaments, films sheets, and similar shaped products, (P.), B., 158. Artificial textile fibres, (P.), B., 1192.

and Ubbelohde, L., artificial fibres, etc.,

(P.), B., 429. Deuts. Celluloid-Fabrik, [centrifuge for] nitration processes [for cellulose and aromatic compounds], (P.), B., 304. Artificial threads, bands, etc., (P.), B., 429. Artificial masses [from phenyl vinyl ketone], (P.), B., 468. Sheets from polyvinyl chloride, etc., (P.), B., 470. Condensation products and lacquers and plastic masses, (P.), B., 471. Sheets or films of polymerisation products, (P.), B., 1239. Very thin sheets from polymerised organic compounds, (P.), B., 1239.

Deuts. Edelstahlwerke Akt.-Ges., caschardened articles made from alloy steels, (P.), B., 456. Aluminiumcontaining iron alloys suitable for preparation of metallic bodies, (P.), B., 458. Articles made of non-magnetic steels, (P.), B., 1070. Heat-resistant articles or apparatus made from steel alloys, (P.), B., 1225. See also Köster, IV.

Deuts. Erdöl. Akt.-Ges., pure paraffin, (P.), B., 1015.

Deuts. Gesellschaft für Fettforschung, determination of the hexabromide value, B.,

Deuts, Gesellschaft für Schädlings-Bekämpfung m.b.H., pest extermination, (P.), B.,

Deuts. Gold- & Silber-Scheideanstalt vorm. Roessler, [corrosion-resistant] aluminium alloys, (P.), B., 148. Oligodynamically-acting germicidal products, (P.), B., 187. Recovery of beryllium compounds from berylliumcontaining minerals, (P.), B., 343. [Thick] cellulose ester foils or films, (P.), B., 430. Foils or films of cellulose triacetate, (P.), B., 430. Recovery of crude precious metals, (P.), B., 457. Pure alcohol, (P.), B., 524. Metal halides, (P.), B., 779. Thermal treatment of light metals and light-metal alloys, (P.), B., 1072. Acetone cyanohydrin, (P.), B., 1312. Concentration of aqueous formaldchyde solutions, (P.), B., 1312. Gold alloys, (P.), B., 1361.

See also Jaeger, G.

Deuts. Houghton Fabrik G.m.b.H., fusion baths for cementation of iron and steel, (P.), B., 1225.

Deuts. Hydrierwerke Akt.-Ges., alkaline textile-treating liquors, (P.), B., 233. Use [as waxes] of substituted amides of higher fatty acids, (P.), B., 259. Products especially suitable for use as vermin-destroying and insecticidal agents, (P.), B., 604. Resin-like products, (P.), B., 701. Condensation reactions [of olefines, etc.], (P.), B.,

See also Schirm, E., and Schrauth, W. Deuts. Kühl-& Kraftmaschinen-Ges.m.b.H., preventing moisture from depositing on cold-stored goods, (P.), B., 978.

Deuts. Tornesit G.m.b.H. See Chem. Fabr. Buckbau.

Deuts. Waffen- & Munitionsfabriken Akt.-Ges., and Berlin-Karlsruher Industrie-Werke A.-G., apparatus for dispensing and consolidating pulverulent materials, (P.), B., 303.

Deutscher Verein von Gas- & Wasserfachmännern e. V., detoxification of [town's]

gas, B., 1001.

Deutser, A. J. See Mangelsdorf, T. A. Deux, Y. See Abragam, D.

Devadatta, S. C. See Acharya, B. N.

De Vaney, G. M. See Munsell, H. E. De Vault, D. See Noyes, A. A.

Development Associates, Inc. See Strindberg, R.

Devers, P. K. See Gen. Electric Co. Devey, J. D., food contamination in

aërial warfare, B., 1264.
Deviatkov, N. D. See Deviatkova, E. D.

Deviatkova, E. D., and Deviatkov, N. D., radiation from a helium discharge tube with glowing cathode, A., I, 1. Deviatnin, V. A., chemical determination

of vitamin- B_1 , A., III, 43.

Devine, J., chemical determination of adrenaline, A., III, 184.

De Vito, G., changes in the sugars of the artichoke during storage [non-harvesting] and their conversion into alcohol, A., III, 443.

Devjatnin, V. A., and Josikova, V. M., determination of ascorbic acid (vitamin-C) in blood and urine, A., III, 282.

De Voe, C. F. Sco Mendenhall, C. E. Devol, L., and Rnark, A. E., time distribution of counts due to a constant source and a radioactive substance which it produces, A., I, 544.

Devons, S., and Neary, G. J., β. and y-radiation of Ra-C", A., I, 210.

Devonshire, A. F., molecular orbitals, A., I, 286. Interaction of atoms and molecules with solid surfaces. VIII. Exchange of energy between a gas and a solid, A., I, 286.

See also Lennard-Jones, J. E.De Voogd, J. G., gas burners in the laboratory, A., I, 265.

and Linden, A. van der, preparation of more concentrated ammoniacal liquor by improving the ammonia washing, B., 1002.

De Vooys, G. J., Westfalia-Dinnendahl-Gröppel A.-G., and Gewerkschaft Sophia-Jacoba, separation of solid materials of different specific gravities, (P.), B., 632. Devor, W. R. See Grasselli Chem. Co.

De Vos, L. See Koolhaas, D. R. De Vout, A. W. See Industrial Patents

De Vriend, J. A. See Liempt, J. A. M. van.

De Vries, G. H. See Platte, J. A.

De Vries, G. M. See Platte, J. A.

De Vries, J. See Dols, M. J. L.

De Vries, O., the "series" principle in field trials. II., B., 1250.

and Hetterschij, C. W. G., mobility of phosphoric acid in soils, B., 477.

De Vries, R. W. P. See Reinders, W.

De Vries. T. See Hattox, E. M., and Miller, F. A.

De Wael, J., electron rays and structure of unimolecular films, A., I, 612. See also Havinga, E.

De Waele, A., and Dinnis, G., double mobility of some non-Newtonian fluids with particular reference to cellulose nitrate sols, A., I, 239.

Dewan, J. G., and Green, D. E., co-enzyme linked reactions between dehydrogenase systems, A., III, 353.

See also Green, D. E.

Dewar, J., Morrison, D. R., and Read, J., piperitone. XIII. Polymorphism of benzylidene-dl-piperitone and some analogues, A., II, 26.

and Read, J., phellandrenes. IV. Comparison of the catalytic dehydrogenation of l-a-phellandrene and l-piperitone, A., II, 66. Catalytic dehydrogenation in the dibenzyl series, A., II, 98.

See also Galloway, A. S.

Dewberry, E. B., preservation and canning of lobster, B., 1263. De Weerdt, W., influence of anatoxins on

blood composition, A., III, 294.

Dewees, E. J. See Taliaferro, D. B., jun.De Wesselow, O. L. V., and Griffiths, W. J., action of normal and diabetic sera on animal liver-glycogen in vivo and in

vitro, A., III, 469. Dewey & Almy Chemical Co., structural concrete and hydraulic cement therefor, (P.), B., 349. Hydraulic cement, (P.), B., 916.

See also Slagle, W. J., and Tucker, G. R. Dewey & Almy, Ltd., concrete and hydraulic cement, (P.), B., 41, 916. Hydraulic cement, (P.), B., 1057.

De Whalley, H. C. S., sugar as an inhibitor

of corrosion in canning, B., 836. Rapid determination of invert sugar in refined

white sugars, B., 1114.

De Wijkerslooth, P., Dutch metalliferous region Moresnet-Bleyberg-Stolberg-Lim-

bourg, A., I, 383. De Wilde, J. H., vapour pressure of camphor, A., I, 506.

De Willigen, A. H. A. See Holwerda, K. Dewing, T. See Buttle, G. A. H.

De Wispelaere, pharmacological action of choline derivatives, A., III, 135. De Wit, J. J. D., biological detection of

two new hormones using Rhodeus amarus as detector, A., III, 322. See also Bretschneider, L. H.

De Witt, C. C., recovery of iodine from

waste iodide solutions, A., I, 421. De Witt, D. J., and Nichols, M. S., fluoride content of some Wisconsin municipal waters, B., 1139.

De Wodzinska. See Fiessinger, N. De Wolf, H. See Sollmann, T.

De Wolf, J., itacononitrile, A., II, 404.

De Worms, C. G. M. See Bachmann, W. E. Dexter, A. D., and Traders, Ltd., T. D.,

shaving cream, (P.), B., 259.

Dexter, S. T., response of quack grass to defoliation and fertilisation, B., 597. Dexter & Sons, Inc., C. H. See Osborne, F, H.

Dey, B. B., and Govindachari, T. R., isoquinoline series. I. Attempted synthesis of isoquinoline derivatives from substituted benzylamines, A., II, 389.

and Kantam, (Miss) P. L., cotarnine series. VIII. Derivatives of 1-aminomethylhydrocotarnine. IX. Attempts to synthesise alkaloids of the crypto-

pine types, A., II, 310, 393. and Srinivasan, T. K., preparation of o-phthalaldehydic acid, A., II, 340. isoQuinoline series. II. isoQuinolines from opianylmethylamine, A., II, 389.

Dey, L. J. \bar{L} . See Clay, J. Deys, W. B., and Dijkman, M. J., gallic acid from tannin, especially from theotannin, by Aspergillus niger, A., III, 315. Deysher, E. F. See Holm, G. E. Deželić, M., viscosities of liquid mixtures

with pyrrole as a component, A., I, 295. Attempt at increasing concentration of heavy water in ordinary water by fractional crystallisation, A., I, 319. Molecular compounds of pyrrole derivatives, A., II, 302.

See also Stern, A. Dhar, J., X-ray study of potassium hydrogen carbonate, A., I, 502.

Dhar, N. R., utilisation of molasses, B., 276. Nitrogen transformations in the soil, B., 819.

and Mukherji, S. K., nitrogen fixation with cow dung, B., 166. Alkali soils and their reclamation. I., B., 267. Denitrification [of soil] in sunlight and its retardation. III., B., 269. Are the Indian soils becoming less productive? B., 819. Nitrogen fixation in soil with cellulosic substances, cow dung, and fats. I., B., 953.

Mukherji, S. K., Seshacharyulu, E. V., and Biswas, N. N., oil cakes and press

mud fertilise alkali fields, B., 820. and Seshacharyulu, E. V., nitrogen fixation and Azotobacter count on application of sugars to soil. II., B., 73. and Varadanam. C. I., preparation and properties of highly concentrated sols. V. Stannic hydroxide sols, A., I, 181. See also Ram, A

Dharmatti, S. S. See Prasad, M. Dhingra, D. R., Uppal, I. S., and Venkataraman, K., wetting agents in textile processing. I., B., 772.

Dhont, J., examination of "coffee extract," B., 1127.

Diacono, H., preservation of hæmolytic antibodies in mercury-protein complexes obtained from guinea-pig's antisheep sera, A., III, 339.

and Durand, R., serological behaviour of metal-protein complexes from agglutinating sera, A., III, 339.

Diagon, K. See Borsche, W. Diago, R. E., determination of coefficient of supersaturation of massecuites, B., 1112. Diakonoff, A., differentiation of Derris and

Lonchocarpus powders, B., 979. Diakov, K. K. See Gernet, E. V. Diamant-Eerde, H. See Fournes, E. Diamond, H. See Hirschfelder, J.

Diamond Alkali Co. See Elledge, H. G. Diatschenko, P., protein from Aspergillus niger, A., III, 396.

See also Lissitzin, M. Diaz, J. See Webre, A. L.

Diaz, M. R., polarisation of [sugar] juices preserved with formaldehyde, B., 275. Di Bella, L., effect of prolan on the calcium balance in frogs, A., III, 491.

Dibina, P. V. See Samorodnitzki, N. J. Dick, G. F., and Boor, A. K., scarlet fever toxin. I. Purification and concentra-

tion, A., III, 125.

Dick, J. See Deleano, N. T.

Dick, J. H., vacuum control in the sugar factory, B., 275.

Dick Co., A. B. See Bjerg, N. H. Dicke, F. F. See Barber, G. W.

Dickens, F., mechanism of carbohydrate oxidation, A., III, 62. See also Curtis, W. E.

Dickenson, H. G. See Clemo, G. R.

Dicker, E., presence of a substance similar to prolan-A in urine in essential hypertonia, A., III, 151. Variation in blooduric acid during scarlatina, A., III, 380. Production of hypertensive substances during autolysis of the kidney, A., III, 457.

Dickerson, J. H., separating composite material into its components, (P.), B., 197.

Dickert, W. See Schwarz, L. Dickie, W. A. See Brit. Celanese. Dickinson, C. G. See Bull, L. B.

Dickinson, D., and Graymore, J., methyleneimines: determination of parachor, A., I, 501.

Dickinson, G. M., Crosson, L. H., and Copenhaver, J. E., identification of alcohols by 3-nitrophthalic anhydride, A., II. 341.

Dickinson, R. G., correlation of photochemical reactions in gases with those in solution, A., I, 574.

and Lotzkar, H., kinetics of thermal isomerisation of cinnamic acid catalysed by iodine, A., I, 251.

See also Wilson, J. Norton.

Dickinson & Co., Ltd., J., Grant, Julius, Dorr-Oliver Co., Stewart, R. F., and Evans, Philip, treatment of paper-mill and similar wastes, (P.), B., 626.

Dickison, W. See MacLeod, G. F. Dickson, A. D. See Dickson, J. G.

Dickson, H., short periodic growth cycle and a secular variation in Lemna minor, A., III, 365.

Dickson, J. G., Shands, H. L., Dickson, A. D., and Burkhart, B. A., barley and malt studies. II. Experimental malting

of barleys grown in 1935, B., 829. Dickson, W. See Roberts, H. A. Dickson, W. M. See Anderson, G. C.

Dickson & Mann, Ltd., and Thornton, C. R., separation of solids from liquids, (P.), B., 305.

Diddle, A. W. See Allen, E. Di Delupis, S. D., use and distribution of

fertilisers; theory and technique, B.,

Didier-Werke Akt.-Ges., production of a gas of definite stoieheiometric composition by carbonisation of fuels, (P.), B., 410. Gas from carbonaceous fuels, (P.), B., 519, 1009.

Diebner, K., and Grassmann, E., artificial

radioactivity. II., A., I, 389. Diebold, A. See Pfeiffer, P. Diebold, H. See Schmitz-Dumont, O.

Dieckhoff, J., and Schulze, E., action of therapeutic doses of digitalis and strophanthin on cat's heart injured by diphtheria toxin, A., III, 425.

Dieckmann, H., and Mohr, H., von Brehmer's determination of blood-reaction in health and disease especially in cancer, A., III, 123. Manometric determination of fermentation and equivalent carbonic acid in two-buffer systems, A., III, 483.

Dieffenbach, E. M., corrosion tests of metals and alloys in spray mixtures, B., 1390.

Diehl, H. C. See Berry, J. A.

Dlehl, H. S., and Minnesota University, Board of Regents, therapeutic agent [for coryza], (P.), B., 89. Diehm, R. A., use of enzymes in prepar-

ation of paper coatings, B., 770. Diek, R. See Vosburgh, W. C.

Dieke, G. H., $2s^1\Sigma \rightarrow 2p^1\Sigma$ bands of the hydrogen molecule, A., I, 1. and Lewis, (Miss) M. N., bands of HD

and D_2 ending on the $2p^1\Sigma$ state, A., I, 485.

Diekmann, J., gas sorption by lignite, B.,

Diels, O., and Kassebart, R., polymerisation processes caused by pyridine, A., II, 353.

and Pistor, H., synthesis in the hydroaromatic series. XIII. a-Picoline and acetylenedicarboxylic ester, A., II, 348.

and Schrum, H., syntheses in the hydroaromatic series. XXVII. Diene syntheses of hetero-rings containing nitrogen. XII. Decomposition of the "yellow substance" to an isomeride of norlupinane (1-methyloctahydroindolizine), A., II, 348.

and Stephan, H. J., identity of the dehydrogenation hydrocarbons, C25H24, from cholesterol and ergosterol, A., II,

Diemair, W., composition of 1936 raspberry juice from the Bavarian Forest, B., 614.

and Mayr, F., calcium pectate and manganese content of raspberries, A., III, 161.

and Szelinski, B., composition of German cultivated strawberries, B., 614.

and Waibel, J., determination of traces of arsenic in musts and wines, B., 176. Sec also Bleyer, B.

Dienbauer, H., carrying out the slag print

process, B., 920. Dienske, J. W. See Nauta, W. T.

Dienst, C., regulation of reaction of acidbase equilibrium in normal urine, A., III,

Diepschlag, E., reduction of iron ores under high pressure, B., 444. Structure of cast iron and its relation to impurities in the melt which act as nuclei, B., 1348.

Diergarten, H., evaluation of steels for roll bearings by their slag inclusions, B., 445. Diesnis, M., deliquescence and efflorescence; determination of critical hygrometric

states, A., I, 136.
Dieterich, L. M., Allison, D. K., and Detracolor, Ltd., colour photography,

(P.), B., 293.

Dieterichs, W. See Gas Light & Coke Co. Dieterle, H., and Beyl, H., constituents of the bark of Lunasia costulata (Miq.), A., II, 216, 265.

and Dorner, O., ericolin, A., II, 369. Constituents of Cratægus oxyacantha, L., A., III, 368.

and Kruta, E., constituent of Drosera rotundifolia, A., II, 25.

and Kruta, E. [with Sauter, W.], constituent of Zanthoxylum fraxineum, Wild, A., II, 112.

Dieterle, W., and Riester, O., infra-red photography beyond 10,000 A. II. and III., B., 622, 981.

Dieterlen. See Petit, P. Dietert, H. W., and Woodliff, E., nonferrous foundry sands, B., 1217.

Dietrich, H. See Micheel, F.

Dietrich, K., and Schmitt, K., rapid pho metric determination of copper a d nickel in steels, B., 921.

See also Freund, Hugo.

Dietrich, K. R., new regulations relating to composition of liquid fuels [in Germany], B., 641.

and Grassmann, H., b.p. relation of mixtures of ethyl alcohol and water beyond the azeotropic point, A., 1, 177. Possibility of minimising shrinkage loss in the spirit industry, B., 177.

Dietrich, M. A. See Du Pont de Nemours

& Co., E. I. Dietrich, W. F., Engel, A. L., and Guggenheim, M., ore-dressing tests and their significance, B., 1063. Dietz, E. See Wieland, H.

Dietz, J. B. See Du Pont de Nemours & Co., E. I.

Dietz, K., acid-proof linings in the oil and fat industries, B., 1076.

See also Frank, K.

Dietz, V., Elliott, E. B., and Boyd, M. C., printing, (P.), B., 1242.

Dietz, W. See Fischer, W. Dietze, W., action of wine on pathological organisms of man, A., III, 277.

Dietzel, A., determination of small quantities of iron oxide in raw materials and glass, B., 133. Theory of decolorising [glass] with selenium, B., 545. Use of mineralspat" in the enamel industry, B., 1048.

Dietzel, R., colloid-chemistry and pharmacy, B., 85.

Dietzler, A.J.See Dow Chem. Co.

Diggs, S. H. See Standard Oil Co.

Di Gleria, J., and Kováts, L. de solubility of soil phosphorus, B., 1098.

See also Becker, Eugene.

Dijck, W. J. D. van, and Ruys, A. II., terpeneless oils, B., 497.

Dijk, J. A. van, general considerations on absorption of volatile substances with liquids, B., 989.

Dijkman, M.J. See Deys, W. B. Dijkstra, D. W., identification of war gases,

B., 733 Dijkstra, H., Zeeman effect in arc spectrum

of nickel, A., I, 157. Dike, P. H., and Leeds & Northrup Co.,

precision resistance, (P.), B., 55. Dikker, G., quality of tobacco goods, B., 840.

Dill, D. B., Daly, C., and Forbes, W. H., pK' of serum and red cells, A., III, 114.

Edwards, H. T., and Consolazio, W. V., blood as a physico-chemical system. XI. Man at rest, A., III, 249.

Talbott, J. H., and Consolazio, W. V., blood as a physico-chemical system. XII. Man at high altitudes, A., III,

See also Daly, C., Hall, F. G., and Newman, E. V.

Dille, J. M. See Koppanyi, T., and Linegar, C. R.

Dillehay, E. R., moulded articles from [bituminous] thermoplastic compositions, (P.), B., 262. Thermoplastic moulding compositions and articles, (P.), B., 468. Thermoplastic moulding compositions containing rubber, (P.), B., 468.

Diller, I. M., turbidity in determination of uric acid with the photo-electric colorimeter, A., III, 192.

Dilley, J. R., glass-scaling furnace, A., I, 634.

Dillinger, J. F., effect of annealing on properties of hard-worked permalloy, B., 1215.

and Bozorth, R. M., heat treatment of magnetic materials in a magnetic field. I. Survey of iron-cobalt-nickel alloys. II. Experiments with two alloys, B., 46.

Dillman, F.J. See Copeman, P.R.v.d.R.Dillon, J. H., extrusion plastometer for unvulcanised rubber, B., 265.

Dillon, L. See Union Oil Co. of California. Dilthey, W., and Dornheim, O., pyrenium XXVIII. Constitution compounds. of benzoylnaphthol, A., II, 343.

and Henkels, S., heteropolarity. XXIX.
Adducts from maleic acid and ace-

cyclone, A., II, 425. Höschen, W., and Dornheim, O., pyrenium compounds. XXVII. 2:4-Diarylnaphthapyrenium salts, A., II, 300.

Horst, L. ter, and Schaefer, A., hetero-polarity. XXVIII. Malcie acid adducts to phencyclone, A., II, 150.

Schommer, W., Thewalt, J., and Henkels, S., pyrenium compounds. XXVI. i-Inositol from red roses, A., III, 161.

See also Pütter, R. Dima, G. See Condrea, P. Dima, M. See Otin, C.

Di Marco, I. See Marconi, F.

Dimbleby, V. See Cauwood, J. D. Dimitropoulos, E. See Tarlazis, C.

Dimov, A. M., rapid determination of manganese in bronzes, B., 448. Determination of small amounts of iron in motor [lubricating] oil, B., 642. Rapid analysis of ferrosilicon, B., 1062.

Kubischkina, T. D., and Poliektova, N. S., polarographic determination of iron in motor oil], B., 1007.

and Moltschanova, R. S., determination of aluminium in steel, B., 563.

and Volodina, O. E., determination of titanium in non-rusting steels, B., 352.

Dimroth, K., process of irradiation of compounds of the ergosterol type, A., ÎI, 376.

See also Wetter, F., and Windaus, A. Dinaburskaja, B. See Kozlov, N.

Dinelli, D. [with Marini, G. B.], difurylmethane derivatives, A., II, 429.

and Marini, G. B., action of formaldehyde on ethyl pyromucate, A., II, 513.

See also Monti, (Signa.) L., Piutti, P., and Roberti, G.

Dingemans, P., vapour pressure of saturated aqueous solutions of dihydroxybenzenes, A., I, 508.

Dingemanse, E., Borchardt, H., and Laqueur, E., capon comb growthpromoting substances ("male hormones") in human urine of males and females of varying ages, A., Ill, 186.

and Laqueur, E., fate of mono- and di-isopropylideneglucose in the animal organism, A., III, 422.

See also Koops, W. S.

Dingenen, W. van. See Itterbeek, A. van. Dinglasan, M. L., formation and nitrogen content of root tubercles of cowpea, B.,

Dingler, M., control of asparagus insects, B., 171.

allo ?

Dinglinger, (Frl.) A., and Schröer, E., kinetics of thermal decomposition of oxalic acid in solution, A., I, 522.

See also Schröer, E. Dingwall, G., and Oberhauser, J., transparent coloured varnishes, etc., (P.), B., 813.

Dinkina, L. S. See Nikolaev, V. I.

Dinklage, K., use of a stability number

[for beer], B., 1116.
Dinley, C. F., apparatus for [degreasing] treatment with solvents, (P.), B., 587. Cleaning or degreasing articles with solvents, (P.), B., 635.

and Bell, J. H., [apparatus for] treatment [of metal articles, etc.] with solvents, (P.), B., 357. Apparatus for [degreasing] treatment with solvents,

(P.), B., 697. Dinnis, G. See De Waele, A.

Dinsdale, A., and Long, F. A., magnetic susceptibilities of the ammonium halides, A., I, 229.

Dintilhac, J. G., and Soc. "L'Huile des Records du Monde S.A.F.," apparatus for testing liquids, especially Iubricants, (P.), B., 18.

Dintzes, A. I., Eschevskaja, M. P., and Klabina, T. I., kinetics of vapourphase cracking of petroleum products, B., 108.

Sharkova, V. R., Sherko, A. V., and Frost, A. V., kinetics and mechanism of decomposition of hydrocarbons. IV. Influence of pressure on the velocity and direction of decomposition of ethane, A., II, 361, 362.

Dionisiev, D. E., reduction of sodium sulphate to sulphide by natural gas, B., 131. Dioszeghy, D., influence of moulding material on surface and structure of cast iron, B., 678.

Dippel, C. J., sensitive quartz spiral-spring balance, A., I, 333. See also N. V. Philips' Gloeilampenfabr.

Dippensar, B.J., environmental and control studies of common scab of potatoes, caused by Actinomyces scabies (Thaxt.), Güss, B., 712. Cause and control of "heat spot" of plums, B., 713.

Dippy, J. F. J., correlation of ionisation constants of organic acids with dipole

moments, A., I, 306.

Evans, D. P., Gordon, J. J., Lewis, Reginald H., and Watson, H. B., ortho-effect. I. Influence of substituents in the o-position on the chemical characters of carboxylic acids and

their derivatives, A., II, 418.

Hogarth, L. T., Watson, H. B., and
Williams, F. R., preparation of some p-dialkylaminobenzaldehydes, A., II, 501. Čondensations of p-dialkyl-with nitroaminobenzaldehydes nitrotoluenes, A., II, 501.

and Lewis, Reginald H., chemical constitution and dissociation constants of monocarboxylic acids. VI. (a) Polarity of vinyl and phenyl groups. (b) Apparent linear relationship between dissociation constants and dipole moments, A., I, 411. Orthoeffect. II. Dissociation constants of o-substituted acids, A., I, 516. Reduction of unsaturated ketones, A., 11, 502,

Di Prisco, L., acetonæmia in guinea-pigs, effect on blood-calcium, A., III, 23.

Dirac, P. A. M., cosmological constants, A., I, 214.

Di Renzo, A., surface treatment with mixtures of tar and rock asphalt, B., 786. Dirken, M. N., and Kraan, J. K., micro-

tonometer, A., III, 334.

Dirking, H., causes of the colour change in cobaltous chloride solutions, A., I,

Dirr-Kaltenbach, H. Sco Felix, K.

Dirscherl, W. See Ach, L.

Dische, Z., coupling of synthesis of adenosinetriphosphoric acid with main oxidation-reduction process in blood glycolysis, A., III, 142. Self-regulation of blood-glycolysis and coupling of its chief oxido-reduction process with the synthesis of difficultly hydrolysable phosphoric esters, A., III, 451.

Dischendorfer, O., vitamin-C in gladiolus leaves, A., III, 233.

Discombe, G., sulphæmoglobinæmia following sulphanilamide treatment, A., III, 215.

See also Archer, H. E.

Diseker, E. G., and Yoder, R. E., sheet crosion on Cecil clay [soils], B., 268.
Dishevski, J. F. See Gorschtein, G. I.

Di Sorrentino, A. P., identity of agglutinins and precipitins, A., III, 166.

Distanov, G. K., solubility of anhydrous sodium bromide in water and liquid ammonia, A., I, 407. Determination of potassium in ammonia synthesis cata-Îysts, B., 777.

Di Stephano, F., determination of bromide in mineral waters containing chloride and

iodide, A., I, 197.

Distillers Co., Ltd., Auden, H. A., and Staudinger, H. P., [shrinkable] bottle caps from eellulose esters, (P.), B., 128.

Auden, H. A., Standinger, H. P., and Hutchinson, H. M., separation of volatilised liquids from gaseous mix-

tures, (P.), B., 512. and Coppock, P. D., adhesive compositions, (P.), B., 1115.

Langwell, H., Maddocks, C. B., and Short, J. F., olefine oxides, (P.), B., 416. Carrying out exothermic [organic] reactions, (P.), B., 757.

Langwell, H., and Stanley, H. M., ethylene oxide, (P.), B., 758.

and Lockey, J., acration of liquids or dispersion of gases or vapours in liquids, (P.), B., 401.

Stanley, H. M., and Youell, J. E., hydration of higher olefines, (P.), B.,

757. Glycol derivatives [ethers], (P.), B., 758.

Stanley, H. M., Youell, J. E., and Minkoff, G., glycol derivatives, (P.),. B., 1172.

and Underwood, A. J. V., distilling systems, (P.), B., 306.
Ditchburn, R. W., and Harding, J., absorp-

tion of light in easium vapour in presence of foreign gases, A., I, 54.

Dittler, E., and Hofmann, A., mixed crystals Mg₂Si₂O₆-LiAlSi₂O₈ and Mg₂SiO₄-LiAlSiO₄, A., I, 482.

Dittmer, J. See Klenck, E.
Ditto, Inc. See Brower, P. V.
Dittrieh, E., effect of pressure on corrosion of steels by hydrogen sulphide. II. chrome and nickel irons, B., 566.

Ditz, H., and Ulbrich, F., interaction of "oxycellulose" (oxidised cellulose) with

Nessler's reagent, B., 331.
Di Vignano, A. T. See Rupe, H.
Divine, R. E. See Smither, F. W.

Divinskaja, E. K. See Magidova, S. S. Dix, E. H., and Mears, R. B., aluminium and its alloys in design of corrosionresistant machinery and equipment, B., 145.

Dix, W., conservation of liquid and stable manures with superphosphate, B., 820. Preparation of artificial farmyard man-

ure, B., 1385. Dix, W. M. See Robey, R. F.

Dixey, F., geology of part of the Upper Luangwa Valley, N.-E. Rhodesia, A., I, 483. Pre-Karroo landscape of the Lake Nyasa region, and a comparison of the Karroo structural directions with those of the Rift Valley, A., I, 483.

Dixit, K. R., chemical effects of electrical discharge, A., I, 626.

Dixon, B., [apparatus for] carbonation of

beer, (P.), B., 720. Dixon, B. E. See Kennedy, W. Q. Dixon, E. H. See Booth, E. T.

Dixon, H. H., are viruses organisms or autocatalysts? A., III, 100.

Dixon, J. E., fuel problems on gas-works, B., 639.

Dixon, J. K. See Askew, H. O., and Kidson, E. B.
Dixon, K. C. Sco Needham, J.
Dixon, L. F. See Darkis, F. R.

Dixon, M., measurement of tissue glyco-

lysis in serum, A., III, 303.

and Lutwak-Mann, C., aldehyde mutase, A., III, 220, 268, 392.

See also Leloir, L. F.

Dixon, T. G., non-slippery floor wax, (P.), B., 154.

Djaditscheva, E. J. Sco Jolson, L. M. Djakova, M. K., Lozovoi, A. V., and Stepantzova, T. G., hydrogenation of homologues of benzene under pressure,

A., II, 330. See also Lozovoi, A. V.Djaparidze, E. See Tananaev, I. V.

Djatschenko, M. M. Sce Danilenko, Djatschkov, V. D., reactions of solutions

of aluminates with sodium silicate, A., I, 575. and Sajzeva, L. P., iodometric deter-

mination of sulphides in cyanide solutions, A., I, 324.

Diemkina, A., increasing flax yields by stimulation, B., 377.

Djen, L. G., pathological creatinuria, A., III, 417.

Dlougatch, L., metallic alloys, B., 928. Dmitrenko, M. T. See Ferdmann, D.

Dmitrevskij, P., conveyance of boiling or gaseous liquids, (P.), B., 401.

Dmitriev, B. S., application of nitric acid to ashing, A., II, 358.

Dmitriev, G. See Agroskin, A.

Dmitriev, N. N., scattering of fast neutrons

by protons, A., I, 389.

Doak, B. W., exudation of glutamine from Chewing's fescue, A., III, 408. See also Hudson, A. W.

Doan, F. J., and Baldwin, F. B., freezing of milk and cream. II. Destruction of fat emulsion in frozen cream, B., 1122.

Doan, G. E., and Schulte, W. C., arc-

welding in argon gas, B., 452.

Dobatkin, V. I. See Karasik, P. I.

Dobbelman, T. See De Diesbach, H.

Dobbins, J. T., and Thomas, L. C., soda

alum system, A., I, 463.

Dobbs, E. J., control of silver-plating solutions, B., 146. British electroplating practice, B., 452.

Dobenecker, O., practical applications of [electrical] conductivity measurements of liquids, B., 1229.

See also Lieneweg, F.

Dobinski, S., structure of polished metal surfaces, A., I, 227.

and Wesotowski, J., density of liquid selenium, A., I, 175. Viscosity of liquid selenium, A., I, 355.

Dobitschin, D., and Gelbart, A., rôle of oxygen in hydrogenation of ethylene on

palladium, A., I, 252.

Dobretzov, L. N., ionisation of atoms of alkali metals on the surface of tungsten, molybdenum, and thoriated tungsten, A., I, 3.

and Morozov, G. A., thermionic emission from barium-coated tungsten, A.,

I, 105.

Dobriner, K., simultaneous excretion of coproporphyrin I and III in chronic porphyria, A., III, 90. Excretion of porphyrin by dogs, A., III, 418. Porphyrin excretion in fæces in normal and pathological conditions, A., III, 418.

and Barker, W. H., total coproporphyrin-I excretion in pernicious anæmia, A., III, 418.

Strain, W. H., and Localio, S. A., determination of coproporphyrin and total coproporphyrin-I excretion, A., III, 418.

Strain, W. H., Localio, S. A., Keutmann, H., and Stephens, D. I., coproporphyrin-I metabolism and hæmatopoietic activity, A., III, 418.

Dobrjanski, A. F., pyrogenic decomposition of aliphatic-aromatic hydrocarbons,

A., II, 54.

Davidova, M., and Pankina, Z., chlorination of propylene oxide, A., II, 225.

Gutner, R., and Schtschigelskaja, M., hydrelysis of dichlorobutanes in presence of sodium carbonate and hydrogen carbonate, under pressure, A., II, 364.

Dobroljubski, A., relationship between secondary electron emission and photo-

sensitivity, A., I, 346.

Dobromislova, A. See Balandina, V., and Berezan, K.

Dobronravov, R. K., and Frost, A. V., chemical equilibria of reactions between hydrocarbons. IX. Equilibrium coefficients of the reaction of polymerisation of isobutylene, A., I, 240.

Dobrovolskaia-Zavadskaia, N., and Raynaud, A., effect of injections of rhenium on the growth of tumours in mice, A., III,

Dobrowolski, C. See Chrzaszczewska, A. Dobrunov, L. G., characteristics of growth and mineral nutrition of hemp with simultaneously maturing male and female plants, A., III, 284. Dobry, (Mme.) A., electrochemical nature of

cellulose solutions, A., I, 239.

Dobrzyńska, K. See Krause, A. Dobson, R. H., and Taylor, R. F., jointing of materials by welding, B., 688.

Dock, E. H., testing of rubber composition soles, B., 1377.

Dockerty, S. M., specific heat of copper from 30° to 200° abs., A., I, 353.

Docking, A. See Radiant Heating. Docksey, P., design and analysis of fractionating columns for complex mixtures, B.,

Dod, K. See Stewart, T. D.

Dodd, A. E., action of slags on refractories; testing, B., 440. Selection of chrome ores for use in steel furnaces, B., 1211. Evaluation of plasticity, B., 1285.

Dodd, L. E., structure of a heavy deposit of solid selenium condensed from the vapour, the liquid being at about 250°, A., I, 173. Density and surface tension by the capillary elevation method, A., I, 202.

Dodd, M. C. See Gruhzit, O. M.

Dodd, R., casein materials as applied to plastics, B., 466.

Dodds, E. C., structure of substances, natural and synthetic, and their reactions on the body, A., III, 348.

and Lawson, IV., simple aromatic cestrogenic agent with an activity of the same order as that of cestrone, A., III, 229. Œstrogenic activity of p-hydroxypropenylbenzene (anol), A., III,

Noble, R. L., Rinderknecht, H., and Williams, P. C., prolongation of action of pituitary antidiuretic substance, and of histamine, by metallic salts, A.,

Noble, R. L., Scarff, R. W., and Williams, P. C., pituitary control of alimentary blood flow and secretion; changes in stomach produced by administration of posterior pituitary extract, A., III, 298.

See also Cutting, W. C.

Dodds, H. H., standardisation of chemical control [of sugar] for the 1934-35 season, B., 75.

and Christianson, W. O., annual summary of chemical laboratory reports from Natal sugar factories, season 1935—36, B., 75.

Dodds, M. L. See Cox, G. J.

Dodé, M., conditions for a heterogeneous reaction with a gas phase in the case of miscibility of the condensed phases, A., I. 81. Dissociation of natural zinc carbonate, a reaction in which a mixed condensed phase intervenes, A., I, 463. Reversible action of iodine vapour on dry potassium nitrite; influence of the miscibility of this salt with the corresponding nitrate, A., I, 527.

See also Moureu, H. Dodel, P., and Dastugne, G., pharmaco-dynamics of the anterior dorsal muscle of the leech; biological reagent for acetylcholine, A., III, 390.

Dodero, J., rabicidal substances in treated patients, A., III, 454.

Dodge, B. F., and Newton, R. H., calculation of pressure effect on liquidvapour equilibrium in binary systems, A., I, 406.

See also Bliss, R. H. Dodge, F. N. See Crane, H. L. Dodge, R. F. See Comstock, C. S.
Dodonov, M. N. See Timakov, V. D.
Dodonova, A. Seo Zinoviev, A.
Dodonova, E. V. See Ivanov, N. N.
Dodson, R. W., Forney, G. J., and Swift,

E. H., extraction of ferric chloride from hydrochloric acid solutions by isopropyl

ether, A., I, 129.

Dodson, T. M., scouring of coal, (P.), B.,

Doe, R. M. See Mason, C. M.

Doe, W. B., and Hydro-Humns Corp. of America, improving growth of plants, (P.), B., 74.

Döbling, W. See Schneider, Wilhelm.

Doelger, W. P., action of micro-organisms on vegetable tanning materials. IV. Acetic acid fermentation. V., B., 266,

Doelling, G. L. See Belie, J.

Döpel, R., efficiency of the D \rightarrow D nuclear reaction, A., I, 58. Neutron emission of beryllium on bombardment with H, D, and He, A., I, 211.

Dörfeldt, W., potato starch and derived products, B., 276.

See also Spengier, O. Doerfer, Jacob. See Doerfer, Joseph. Doerfer, Joseph, and Doerfer, Jacob, prim-

ing mixtures, (P.), B., 396.

Doering, H., titrimetric determination of small amounts of bromine in presence of chlorides, A., I, 260. Determination of iodine in organic substances, A., II, 476. Micro-determination of iodino in biological material, A., III, 288, 334. Bromine content of blood, A., III, 292.

Döring, W., variation with temperature of the magneto-striction of nickel, A., I, 69. Limit of superheating and resistance to tensile stress of liquids, A., I, 557.

Dörle, E. See Winterfeld, K. Doff, S. See Rakieten, M. L.

Doffin, H. G., electrolytic recovery of silver from photographic baths, (P.), B., 148.

Dogadkin, B., water dispersion of rubber; preparation of the dispersion and its general properties, B., 66. See also Balandina, V., and Berezan, K.

Dogliotti, G. C., Meloni, O., and Castellani, T., vitamin-C and glutathione; changes in blood-glutathione following parenteral administration of vitamin-

C, A., III, 44. and Slavich, E., extravisceral origin of bilirubin in man. I. Arterial and venous blood-bilirubin; venous bloodbilirubin after stasis, A., III, 2.

Doherty, J. B. See Earl, J. C.

Doherty Research Co., and Burke, S. P. apparatus for partial oxidation of hydrocarbons, (P.), B., 1013.

and Kaplan, W., petroleum conversion, (P.), B., 1016.

Dehogne, A., differences between [vegetable-tanned] sole leathers of slow and rapid tannage, B., 1094.

Doisy, E. A., Katzman, P. A., and St. Louis Univ., [anterior pituitary-like] hormone, (P.), B., 730. See also Thayer, S. A.

Doja, M. Q., quaternary ammonium iodides of dimethyl-p-toluidine, A., II, 12. and Mokeet, A., preparation of p-diethylaminobenzaldehyde, A., II, 36.

Doladilhe, M., physical property of one of the constituents of the non-dialysable fraction of blood-serum, A., III, 83. Viscous protein of syphilitic sera, A., III, 164. Relationship between alexin and viscous protein of serum, A., III, Dissociation of [serum-]globulin into viscous protein and hæmoglobin, A., III, 290.

and Morel, C., influence of alexin on dispersion of a colloidal complex by blood-serum, A., III, 85.

See also Charpentier, P. G. Dolbear, C. E., Wiseman, P., and Wiseman P. K., refining of petroleum distillates, (P.), B., 320. Dolby, D. E. See Bailey, K.

Dolby, E. R., ventilation with air-con-

ditioning in modern buildings, B., 296. Dolby, R. M., McDowall, F. H., and McDowell, A. K. R., Cheddar cheese making. V. Factors influencing acidity and mineral content of cheese. VI. Factors influencing relation between lactic acid and titratable acidity of whey, B., 491.

See also McDowall, F. H.

Dolch, H., theory of light nuclei, A., 1, 163. Dolch, M., and Rank, V., characteristics of "fixed" carbon, B., 1153.

Dold, H., Lächele, W., and Hsing, D. D., properties, extent, and nature of action of antibacterial inhibitory substance (inhibin) of human saliva, A., III, 417.

Doldi, S., analysis of methyl alcohol-etherwater mixtures, B., 212. Use of acctal

as a fuel, B., 1006.

Dole, M., relative at. wts. of oxygen in water and air. II. Relative at. wt. of oxygen in fresh water, salt water, and atmospheric water vapour, A., I, 57. Surface tension of strong electrolytes, A., I, 562.

and Gibney, R. B., deuterium abundance ratios in organic compounds. III.

Cholesterol, A., II, 99.
See also Gabbard, J. L., and Gibney, R. B.
Dolejšek, V., and Klein, J., effect of the penetration of X-rays on the resolving power, A., I, 337.

Doles, H. McG., erythrocyte and its rel-

ation to blood pressure, A., III, 195.

Dolgina, J. I. See Miloslavski, N. M. Dolgov, B. N., and Koton, M. M., synthesis of esters by dehydrogenation of alcohols. II. Preparation of catalysts and influence of activators, A., I, 144.

Koton, M. M., and Sidorov, N. V., synthesis of esters by dehydrogenation of alcohols. IV. Preparation and re-

generation of catalysts, A., I, 144. See also Abramov, N. M.

Dolgov, K. A., effect of sodium hydroxide, sulphide, sulphite, and carbonate on straw pulping, B., 656.

Dolgova, E. See Delimarski, J. K. Dolid, J., aluminium stearate solutions, (P.), B., 259.

Dolinski, P. I., rapid determination of water in heat-refractory and other materials, by the distillation method, A., I, 578. Nitric acid-chlorate method of simultaneous determination of silicon and chromium in ferrochromium, B., 1062. Rapid exothermic determination of water in coke and other materials, B., 1152.

Dolique, R., combustion of cyanogen, A., I, 93. Reduction and volumetric determination of the selenic ion by hydrochloric acid, A., I, 97. Equation for the

fineness of powders, B., 508.

Dolivo-Dobrovolski, V. N., improving the quality of viscose cellulose, B., 1320. . Doljanski, L. See Halberstädter, L. Dolkart, R. E. See Chor, H. Doll, W. See Hückel, W.

Dolley, P. T., absolute crystallisation rate of sodium sesquicarbonate, B., 1333. Dollius, H., [plant] growth-substance, A.,

III, 49.

Dolliver, M. A., Gresham, T. L., Kistiakowsky, G. B., and Vanghan, W. E., heats of organic reactions. V. Heats of hydrogenation of various hydrocarbons, A., I, 364.

Dolowitz, D., Fazikas, J. F., and Himwich, H. E., effect of lead on tissue metabolism, A., III, 172.

Dols, M. J. L., influence of calcium and phosphate ratio and contents of basal diet on vitamin-D requirements

of chicks, A., III, 105.

Jansen, B. C. P., Sizoo, G. J., and De Vries, J., phosphorus metabolism in normal and rachitic rats with a radioactive phosphorus isotope, A., III, 307.

Domange, L., equilibrium reaction of water vapour with several metallic fluorides at high temperatures, A., I, 185. Crystallised manganic sulphate, A., I, 259.

Domann, H. See Meyer, Julius.

Domański, J. Seo Jablczynska-Jedrzejewska, H.

Domanski, T. J., recovery of divinyl ether from human tissues, A., III, 309.

D'Ombrain, G. L., and Fortescue, C. L., deposition of metals by eathodic spluttering, B., 355.

Dombrovskaja, I. S. See Bergman, A. G. Dombrovskaja, N. S., and Zvorikin, A. J., quaternary system K₂O-NH₃-P₂O₅-H₂O; solid solutions in the system KH2PO4-NH₄H₂PO₄-H₂O, A., I, 618. Dombrowski, S., Dehryng, B., and Stolz-

mann, Z., accuracy in the measurement of the urea excretion-constant (Ambard's constant), A., III, 254.

Domenici, F., hydrocyanic acid and glu-cose, A., III, 29. Glycæmic curve during experimental potassium cyanide poisoning, A., III, 267.

Domes, F., cleaning scale from a [Garbe] boiler while in service by means of trisodium phosphate, B., 1141.

Domini, G., content of ascorbic acid in adrenals of guinea-pigs with experimental oxalate-phosphate hypocaleæmia, A., III. 14.

Domm, E. C. See Nat. Standard Co. Domoto, T., canning of rice, (P.), B., 1405.

Donahue, T. H. See Johnson, G. E. Donald, A., and Stölzing, H. E., firing of coals sprayed with oils, B., 312.

Donald, M. B., system potassium chloridepotassium chlorate-water at 20°, 50°, and 75°, A., I, 517. Leaching in theory and practice, B., 300. Leaching of sugar beet, B., 605.

Donaldson, G. W. See Hartley, G. S.

Donaldson, H. C., jun. See Westinghouse

Elec. & Manufg. Co. Donatelli, L., and Pratesi, P., pharmacology of sodium tetramethylammonium glycerophosphate, A., III, 478.

Donelson, J. G. See Harned, H. S. Donen, I., deciduous fruit. II. Effect of time of picking on chemical changes in Kelsey and Gaviola plums in store, B.,

Donham, C. R., and Fitch, C. P., use of gelatin in rapid test preparations of Bacterium abortus antigen; variation in the effect of gelatin on agglutination titres of bovine scra, A., III, 6.

Doniach, I., and Mottram, J. C., sensitisation of the skin of mice to light by

carcinogenic agents, A., III, 460.

Donlan, T. R. See Standard Oil Development Co.

Donleavy, J. J., and Gilbert, E. E., synthesis of arylideneisooxazolones, A., II,

Donley, H. L., atomic wave functions for two stages of ionisation of silicon, A., I,

Donn, L., determining the aniline point of dark petroleum products, B., 751.

Donnally, H. H., Schutz, C. A., and Nimetz, A., chronic lead poisoning in early childhood, A., III, 218.

Donnay, J. D. H., and Harker, D., generalisation of the Bravais law, A., I, 171.

Donnelly, H. F. E. See Davies, R. J. Donnelly, J. F., and Donnelly Process Co., selective cracking of hydrocarbons, (P.), B., 645.

Donnelly, J. L., liquefying of sodium

hydroxide-albumin gels, A., I, 81. Donnelly Process Co. See Donnelly, J. F. Donovan, P. B., and Hanke, M. E., vitamin-B and -G $[-B_2]$ of commercial beer, B., 76.

Donovan, R. L. See Cole, C. L.

Donovick, S. E., and Beckwith, T. D. open system respirometer for study of gaseous metabolism of micro-organisms, A., III, 315

See also Beckwith, T. D. Dons, E. M. See Jacobs, D. L.

Dontcheff, L., and Kayser, C., effect of variations in atmospheric carbon dioxide on respiratory quotient and alkaline reserve of the frog, A., III, 1. Effect of variation in atmospheric temperature on respiratory quotient and alkaline reserve of the tortoise, A., III, 126.

Dontzov, P., determination of metallic inclusions, B., 451.

Dony-Hénault, O., and De Jaer, A., electrolytic cells with mercury cathodes [for making alkali-metal amalgams], B., 1073. Mercury-cathode electrolytic cells, B., 1229.

Donzelot, P_{\bullet} , structure of methyl and ethyl

selenides, A., I, 63.

and Barriol, J., oscillations of the carbon chain in the benzene molecule, A., I, 219. Relation between Raman frequencies and interatomic distances, A., I, 443.

Doodchenko, P. L. See Pelipetz, M. G. Doom, E. F. See Union Carbide & Carbon Corp.

Dopfer, O., application of results of modern research in the field of margarine manu-

facture, B., 1262.

Dopter, P., and Frémont, T., mineral nitrogen in nutrition of cultivated plants, B., 820.

D'Or, L., and Henrion, J., free intramolecular rotation and dielectric loss in a high-frequency field, A., I, 396.

Dorabialska, (Mlle.) A., and Turska, (Mlle.) E., application of thermochemical method to study of corrosion of metals, A., I, 191. Doran, H. M., Houghton, H. D., and

Anaconda Copper Mining Co., [anode for | electrolysis [of zinc sulphate solutions from ore leaching], (P), B., 803.

Doran, K. M. See Channon, H. J. Doran, W. J., and Shonle, H. A., barbituric acids containing the 2-methylallyl group,

A., II, 468. D'Orazi, G., determination of amino-acids

[sugar] in factory liquors, with special reference to unaccounted for loss by diffusion, B., 605. Dorche, J. See Meersseman, F.

Dorchester, C. S., effect of electric current on certain crop plants, B., 1251. Dore, W. H. See Hassid, W. Z.

D'Orelli, E., concentration of oxidised ores by froth flotation, (P.), B., 456.

Dorey, S. F., chemical intercrystalline fracture of riveted joints in boilers, B., 399. Welded joints in pressure vessels, B.,

Dorfman, R. I. See Gallagher, T. F.

Dorfman, W. A., simple micro-electrode for determining $p_{\rm H}$ and E_b , A., I, 332. Redox polarity of the amphibian egg and its relationship to the bioelectric polarity of the egg, A., III, 198. Dorfmüller, G. See Spengler, O.

Dorn, C., and Erastova, R., drying properties of mixed oils, B., 1365.

Dorn, J. E., and Glockler, G., X-ray study of structure of copper, lead, cadmium, and antimony at high temperatures, A., I, 287.

Dorn, P., structure and composition of the

earth's crust, A., I, 585.

Dornauf, J., recent advances in die- and pressure castings of zinc[-base alloys] with special reference to American practice, B., 570.

Dorner, H., purification of glycerin waters, B., 696, 805.

Dorner, O. See Dieterle, H. Dorner, W., and Thoeni, M., secondary fermentations causing stinking odours and decay in Gruyère and Emmenthal checse, B., 834.

Dornfeld, J. F., drying apparatus, (P.), B.,

Dornheim, O. See Dilthey, W.

Dornte, R. W., Fergusson, C. V., and Haskins, C. P., [lubricating] oil oxidation; reaction which is apparently retarded by the products, B., 12. Sce also Marshall, A. L.

Doro, B. See Trost, F.

Dorofeev, P. P. Seo Generozov, B. A. Dorosinski, L. S. See Gnesin, J. D.

Dorp, D. A. van, Limburg, J., and Nobel, P. C., systems of carbamide with nitrobenzene, m-dinitrobenzene, and 1:3:5trinitrobenzene, A., I, 617.

Dorr Co., Inc., purification of liquids, (P.), B., 305. Plant for treating sewage and similar liquids, (P.), B., 398. Treatment of sewage and similar sludge, (P.), B., 506. Sedimentation or other apparatus having rotary rakes or similar members, (P.), B., 856. Sewage-sludge digestion and apparatus therefor, (P.), B., 986.

See also Keefer, C. E., Lykken, H. G.,

Miller, A. L., and Rankin, R. S.
Dorr-Oliver Co., Ltd., and Gibbs, R. C.,
clarifying of liquids and thickening of sludge or pulp, especially with reference to disposal of sewage, (P.), B., 398. Apparatus for digestion of sewage sludge and similar organic matter, (P.), B., 398.

See also Dickinson & Co., J., and Talbot, H, J.

Dorr-Oliver Naamlooze Vennootschap, thickening, stirring, or agitating apparatus, (P.), B., 304. Apparatus for cleaning screens and similar devices for separating solids from liquids, (P.), B., 1289.

Dorrance, G. M., and Ciccone, E. F., production of sarcoma in rats as a result of feeding crude wheat-germ oil, A., III,

Dorrance, R. L., Ellis, R. C., and Matheson, A. D., composition of some complex metallic cyanides. I. Potassium silver cyanide, A., I, 575.

Dorrill, F. See Du Pont de Nemours & Co.,

Dorsch, J. B. See Stewart, J. K. Dortmunder Brückenbau C. H. Jucho,

gas purifiers, (P.), B., 1159.

Doss, K. S. G., interpretation of adhesion tension data, A., I, 408. Inhibition of fluorescence, A., I, 497.

See also Venkatanarasimhachar, N. Dostal, H., reaction kinetics of mixed polymerisations, A., I. 142. Kinetics of thermal polycondensation reactions, A., I, 466. Reaction kinetics of chain polymerisations, A., I, 522.

and Jorde, W., thermal polymerisation of

styrene, A., I, 416.

and Mark, H., estimating distribution of molecules of different sizes in macromolecular systems, A., I, 70. Determining distribution of mol. wts. in macro-molecular substances, A., I, 131. Action of oxygen in polymerisation reactions, A., I, 141. Kinetics of polymerisation reactions, A., I, 366.

Mark, H., and Raff, R., mechanism of thermal polymerisation and polycondensation, A., I, 366.

Dostál, J. See Vondráček, R.

Dostal, R., correlation effect of storage organs and growth-substance, A., III, 49. Seed leaf stems of Vicia as indicators of the inhibitory action of growth-substance, A., 1II, 502.

and Hošek, M., influence of hetero-auxin on morphogenesis in Circaea (Sachs

phenomenon), A., III, 501.

Dostal, V., compounds of einnamaldehyde

with skatole, A., II, 391.

Doster-Virtue, M. E. See Virtue, R. W.

Dotti, L. B. See Hrubetz, M. C., and Riddle, O.

Doty, M. B., dry and dispersed colours, B.,

Doty, R. E., effect of lime applications on [sugar cano] juice quality, B., 1388.

Doubilet, H., hepatic exerction in man of bile acids after oral administration, A., III, 253. Hepatic excretion in the dog following oral administration of various bile pigments, A., III, 421.

and Lilly & Co., E., iron bile salt, (P.), B., 291.

and Reiner, M., absorption of fat from the human ileum, A., III, 305.

Doubly, J. A. See Carswell, T. S. Doudoroff, P. See Sumner, F. B. Dougan, C. E. See Seaver, J. J.

Dougher, P. A., cleaning steel castings,

B., 1213. Dougherty, R. S. A., "Mayari R" corrosion-resistant, high-strength steel, B.,

Doughty, E. W. See Eversole, W. G.

Dougill, G. See Gas Light & Coke Co. Douglas, G. W., and Humphreys, F. E., mol. wts. of vegetable tannins, B., 1093. Douglas, R. W., thermal endurance of glass articles, B., 137.

Douglas, S. D., and Stoops, W. N., polymer[ide] distribution in vinyl ester resins, B., 61.

See also Carbide & Carbon Chemicals Corp.

Douglass, A. G., simplification of the peroxidase reaction [in blood smears], A., III, 139.

Douglass, I. B., acylseleno-ureas [-carb-amides], A., II, 313. Douglass, W. A. See Du Pont de Nemours

& Co., E. I.

Douillet, $A_{\cdot,\cdot}$ and Ficheroulle, $H_{\cdot,\cdot}$ solubility of carbazole in various solvent mixtures; properties of mixtures of ether and [monohydric aliphatic] homologous alcohols, B., 1168. Gelatinisers; gelatinising powder of oxalic esters, B., 1280.

Doumani, T. F. See Kobe, K. A. Dounce, A. L. See Sumner, J. B.

Dourif, H., and Standard Ultramarine Co., ultramarine-blue [gel for laundry purposes], (P.), B., 65.

Dow, R. B., effects of pressure and temperature on viscosity of lubricating oils, B., 870.

Dow Chemical Co., and Bass, S. L., organic

phosphates, (P.), B., 217. and Britton, E. C., liquid organic derivatives of phosphoric acid, (P.), B., 217. Synthetic lubricant, (P.), B., 1165. Britton, E. C., and Coleman, G. H.,

β-chloroalkyl esters of aliphatic acids, (P.), B., 526.

Britton, E. C., and Dietzler, A. J., 1-mercapto[thiol]-5-tert.-butylbenzthiazole, (P.), B., 530. Britton, E. C., and Martin, L. F., cumyl-

phenol[4 - hydroxy - $\beta\beta$ - diphenylprop-

ane], (P.), B., 119.

Britton, E. C., and Nutting, H. S., 1:3-diamino-2-methylpropanol-2 [aa. diamino-tert.-butyl alcohol], (P.), B., 878.

Britton, E. C., Perkins, R. P., and Lundquist, J. T., arylmercuric nitrates,

(P.), B., 530.

Britton, E. C., and Slagh, H. R., magnesium phenyl chloride, (P.), B., 1180. Chamberlain, L. C., and Hooker, G. W., extraction of iodine [from brine], (P.), B., 37.

Coleman, G. H., and Moore, G. V., polyglycols, (P.), B., 1172.
Coleman, G. H., and Warren, G. W.,

tert.-butyl alcohol, (P.), B., 325.
Gann, J. A., and Gross, W. H., treatment of magnesium articles, (P.), B.,

Grebe, J. J., Reilly, J. H., and Wiley, R. M., carbon chlorides, (P.), B., 212. Grebe, J. J., and Stoesser, S. M., heatstorage and -transfer agent, (P.), B.,

Grebe, J. J., Stoesser, S. M., and Minger, F. R., dehumidifying solution, (P.), B.,

Grether, E. F., and Du Vall, R. B.,

glycollic acid, (P.), B., 21. and Hale, W. J., simultaneous hydrolysis and ammonolysis of aryl halides, (P.), B., 216.

Heath, S. B., and Ohman, M. F., treatment of crude silver iodide, (P.), B.,

Hoy, J. E., and Brown, L., casting light metal [magnesium], (P.), B., 1072.

and Lamb, N., purification of acetic anhydride, (P.), B., 325.

Lowry, R. D., and Reynolds, F. L., rolling magnesium alloys, (P.), B., 252. and Mills, L. E., alkaline-earth metal salts of 2:4:5-trichlorophenol, (P.), B., 528. Insecticide, (P.), B., 715, 1108.

Mills, L. E., and Fayerweather, B. L., ${\bf I: 2- dihydroxymono} cyclohexylbenzenes,$ (P.), B., 651

and Murch, W. M., vat dyestuff from 3:3'-dibromoindanthrene, (P.), B., 653. Putnam, M. E., Britton, E. C., and Perkins, R. P., tertiary alkyl phenols,

(P.), B., 528.

Dow Chemical Co., and Reilly, J. H., alkyl

halides, (P.), B., 212. Stoesser, S. M., and Fry, W., acid composition for treatment of deep wells, (P.), B., 857.

and Stoesser, W. C., halogenated phenyl diphenyl[yl] ether, (P.), B., 217. Purification of phenylphenols, (P.), B., 1023.

Dowd, L. R. See Anderson, E. O. Dowdell, J. T. See Hygienic Wire Works. Dowdell, R. L. See Queneau, B. R.

Dowden, J. B., increasing sensitivity of bimetal thermometers, A., I, 330. Dowds, J. H., poisoning by sodium bismuth

tartrate injections, A., III, 29.

Downes, J. R., spray drying of [sewage] sludge, B., 191.
Downey, K. M. See Elmquist, R. E.
Downie, C. C., utilising brass slags, B., 569. Non-tarnishing silver-plate made by alloying, B., 1222. Treatment of silver sulphide precipitates; extraction

of pure silver, A., I, 575.

Downing, F. B., Walker, H. W., and Gasoline Antioxidant Co., motor fuels,

(P.), B., 1163.

See also Du Pont de Nemours & Co., E. I. Downing, G. H., and Holding, H. R., ovens or kilns for use in manufacture of earthenware tiles, bricks, etc., (P.), B.,

Downing, R. C., dustless coke, B., 861. Effect of hydrogen cyanide on [iron] oxide and hydrogen sulphide efficiency [in gas purification], B., 864.

Downs, C. R., Weiss, R. P., and Weiss &

Downs, Inc., tar acid product, (P.),

and Weiss & Downs, Inc., conditioning air, (P.), B., 6. Dehumidifying air, (P.), B., 6. Deodorised calcium chloride, (P.), B., 36.

Downs, R. See Burke, S. P.

Dowson, A. G., new intermediate phase in the aluminium-copper system, A., 1, 454. Dowson, V. H. IV., insecticide trials with date palms, Kut as-Sayyid estate, 1934,

Dowzard, E., Thomas, T. K., and Russo, M., immiscible solvent method for determination of morphine in opium,

Dox, A. W. See Gruhzit, O. M. Doyle, J. D., and Doyle, M. K., preserv-

ation of eggs, (P.), B., 727.

Doyle, J. P., and Westergreen, E. E., heat-insulation treating and binding compound, (P.), B., 739.

Doyle, M. K. See Doyle, J. D. Dozois, K. P., Carr, C. J., and Krantz, J. C., jun., sugar alcohols. VIII. Oxidative specificity of Acetobacter suboxydans, A., III, 433.

Carr, C. J., Krantz, J. C., jun., Hatchel, F., and Beck, F. F., sugar alcohols. VI. Utilisation of sugar alcohols and their anhydrides by various micro-organisms, A., III, 274.

Drabkin, D. L., and Ravdin, I. S., mechanism of convulsions in insulin hypoglycæmia: interrelationship of blood concentration, cerebrospinal pressure, and convulsions, A., III, 402.

Drabkin, I. See Kozlov, N.
Dräger, O. H., detecting small quantities
of carbon monoxide in air or other gas, (P.), B., 14. Detecting the presence of mustard gas, (P.), B., 503. See also Schröter, G. A.

Draemel, F. C. See Sherwood, T. K. Draganesco, A. L., m.p. of cocaine hydro-

chloride, A., II, 265.

Dragone-Testi, G., germination of maize embryos outside the grain and in presence of fructofuranose polyoses, A., III, 106.

Dragos, M. See Ornstein, I. Dragstedt, C. A., Bradley, J. D., and Mead, F. B., effect of iron on hæmoglobin regeneration in gastrectomised dogs, A., III, 58.

and Mead, F. B., peptone shock, A., III, 215.

Dragstedt, L. R., Prohaska, J. van, and Harms, H. P., substance in pancreas (fat-metabolising hormone) which permits survival and prevents liver changes in depancreatised dogs, A., III, 279.

See also Harms, H. P., and Prohaska, J. van.

Dragulescu, C. See Ripan-Tilici, R. Drahtwerk Bergerhammer A., vom Brancke, jun., [steel] sheets, bands, tubes, rods, and wires, (P.), B., 580. Draisbach, F. Seo Chem. Fabr., J. A.,

Benckiser G.m.b.H.

Dranovski, A. B. See Opotzki, V. F. Drapalová, Z. See Sorm, F.

Draper, W. B., and Longwell, B. B., device for indicating continuously approximate percentage of carbon dioxide in a stream of flowing gases, A., III, 192.

Dratschev, S., and Karelskaja, T., phosphate-alkali method of determining hardness of natural waters, B., 192.

Drawert, H., staining of plastids in fixed plant cells by acid fuehsin and toluidineblue, in relation to $p_{\rm H}$, A., III, 498.

Drea, W. F., spectrum analysis of dental tissue for "trace" elements, A., III,

Dreifus, E. I., dry concentrator, (P.), B.,

Dreisbach, D. See Hovorka, F.

Dreisch, T., and Trommer, IV., optical absorption of solutions of coloured inorganic salts in the near infra-red, A., I., 598.

Dreitzer, I. G. See Ivanovski, F. P.Drennan, H. E., and Phillips Petroleum Co., treatment of alkali wash liquors [from hydrocarbon refining], (P.), B., 1161.

Dreschner, E. See Glazunov, A. Dressel, J. See Stackelberg, M. von. Dresser, H. A. See Nance, G. R.

Drever, H. I., symplectite-bearing nodules in the Ardgour marble, Argyllshire, A., I. 101.

Dreving, V. P. See Bach, A. N. Drevol, Z. I. See Ostrovski, A. I.

Drevon, B., reaction of morphine with vanillin and hydrochloric acid; different action of some aromatic aldehydes on morphine and \(\psi\)-morphine, A., II. 478.

and Hagopian, J., bromine index of urine, A., III, 169.

and Richard, A., fate of hydroxydimorphine following intravenous injection, A., III, 66.

Drew, H. D. K., and Hatt, H. H., chemiluminescent organic compounds. I. Isomeric simple and complex hydrazides of phthalic acid and mode of formation of phthalazine and isoindole rings, A., II, 118.

Drew, H. D. K., Hatt, H. H., and Hobart, F. A., chemiluminescent organic compounds. III. N-Methylated phthalaz-1:4-diones, A., II, 118.

Head, F. S. H., and Tress, H. J., stereochemistry of plato-tetrammines, A.,

and Pearman, F. H., chemilumiuescent organic compounds. II. Effect of substituents on the closure of phthalylhydrazides to 5- and 6-membered rings. IV. Amino- and hydrazinocyclophthalhydrazides and their relative luminescent power, A., II, 118,

and Pratt, N. H., interactions of cobalt chloride and ethylenediamine, A., I,

See also Chattaway, F. W.

Drew, T. B., and Mueller, A. C., boiling, B., 1286. See also Colburn, A. P.

Drewes, K., casein-degrading powers of the moulds of soft cheese, A., III, 223. Drewitt, J. G. N. See Chattaway, F. D.

Drewry, M. K., prevention of spontaneous

heating of large coal piles, B., 403.

Drews, B., autolysis of cultured yeasts,
A., III, 33. Rapid Kjeldahl method for nitrogen determination, B., 829.

Drews, R. M., bright zinc-plating process
[for steel] produces brilliant deposits directly from the bath, B., 1358.

Drewsen, P., and Hinde & Dauch Paper Co., prevention of slime growth in paper-making processes, (P.), B., 1038. See also Barrett Co.

Drewski, K., spectral analysis of duralumin, B., 1224.

Drexler, F. See Zahn, K. Dreyer, D. J. See Tomkins, R. G. Dreyer, R. See Chrometzka, F. Dreyer, R. M. See Fraser, H. J.

Dreyfus, C., yarn and fabric of mixed textile materials, (P.), B., 1190. Spun yarn containing organic derivatives of cellulose, (P.), B., 1190. Spun yarn and fabric made therefrom, (P.), B., 1190.

Dreyfus, H., artificial crêpe threads and fabrics made thereof, (P.), B., 128. Cellulose derivatives, (P.), B., 228. Manufacture or treatment of filaments, threads, yarns, etc., (P.), B., 228. Treatment [crimping] of textile yarns, (P.), B., 228. Textile and other (P.), B., 228. Textile and other materials of organic derivatives of cellulose, (P.), B., 229. Textile yarns, (P.), B., 229. [Crèpe] textile threads and fabrics containing cellulose esters or ethers, (P.), B., 229. Treatment [crinkling] of yarns and similar materials, (P.), B., 229. Cellulose derivatives and products obtained therefrom, (P.), B., 333. Cellulose, (P.), B., 428. Chemical processes in the gaseous or vaporous phase. (P.). the gaseous or vaporous phase, (P.), B., 512. Yarns, fabrics, films, etc., of organic esters of cellulose, (P.), B., 536. Artificial filaments, yarns, ribbons, and similar materials, (P.), B., 1192. Artificial filaments, films, and similar materials, (P.), B., 1192. Artificial filaments, foils, etc., by wetspinning processes, (P.), B., 1192. Treatment of artificial filaments, threads, foils, films, etc., (P.), B., 1331. Manufacture or treatment of textile materials [retaining crimp], (P.), B., 1332.

Sec also Brit. Celanese.

Dreyfus, M. E., and Western Chem. Co., compound and method for conditioning boiler, steam, and condensate systems, (P.), B., 991.

Dreyfus, P., condensations of benzoyl-

formic acids, A., II, 195.

See also Vanzetti, B. L.

Dreymann, C. G., [petroleum-wax] adhesive and waterproofing compositions and use thereof, (P.), B., 69.

and Grant Paper Box Co., moisture-proof paper board, etc., (P.), B., 230.

Dreyspring, C. See Krügel, C.

Driel, M. van, and Verweel, H. J., structure of the triple nitrites, A., I, 401.

Driessens, J. See Lambret, O. Drieux, H. See Giroud, A.

Driggers, B. F., codling moth experiments in New Jersey, 1935, B., 714.

Drijver, A., increasing the efficiency of centrifugal separators for blast-furnace dust, B., 196.

Drikos, G. See Karagunis, G.

Drilhon, A., influence of parasitism on mineral equilibrium of the tissues (sacculine in crabs), A., III, 257. Mineral exchanges in homeo-osmotic fish, A., III, 475.

and Busnel, R. G., potassium and the alkaline reserve of coleoptera, A., III,

and Florence, G., physical chemistry of fish blood, A., III, 54.

See also Busnel, R. G.

Drill, V. A., effect of yeast on liver-glycogen of white rats during hyperthyroidism, A., III, 495.

Drinberg, A., synthesis of drying oils, B., 1365.

Shebrovski, V., and Sokolov, G., synthesis of cresol-glyptal oil bases and lacquers, B., 1088.

and Tichmirov, A., "pentaphthalic" enamel, B., 1085.

Dring, G., phenolic and cresylic types of

plastics, B., 808.
Drinker, C. K., Warren, M. F., and Bennett, G. A., problem of possible systemic effects from certain chlorinated hydrocarbons,

A., III, 426.
Driscoll, J., Bruce, D. S., and Johns-Manville Corp., treated fabric, (P.), B., 198. Friction element, (P.), B., 198.

and Johns-Manville Corp., wear- and heat-resisting composition, (P.), B.,

Driscoll, R. L., apparatus for automatic analysis of fluctuations in radioactive disintegration, A., I, 583. Driver-Harris Co. See Lohr, J. M., and

Mayoral, J. E.

Drögsler, O., determination of water absorption of bricks, B., 675. Effect of the "freezing" test on strength of tiles, B., 913.

Droma, L. O., and Grimes, M., Escherichia communior found as a contaminating organism in "starter" [in cheese manu-

facture], B., 1400.

Drop, J., explosion regions at reduced pressure. II. Influence of pressure on explosion limits of binary and ternary systems containing CH₄, MeCl, O₂, and N₂O; quenching action of CO₂ and SO₂. III. Applicability of simple formulæ to experimental data in binary and ternary system, A., I, 190.

Droshina, V. I., and Janus, R. I., rareearth elements in a metal lattice, A., I,

Drossbach, P., production costs of aluminium, B., 576.

Droste, G. F. von, secondary radiation from the β -rays of radium-E, A., I, 160.

Drotschmann, C., flour requirements in [electric] battery manufacture, B., 693. Drouineau, See Bordas.

Drouineau, G. See Boischot, P., and Demory, P.

Drozd, I. F. Sec Raskin, L. D.
Drozdov, N. S., decomposition of salts of
thiocarbamic acid; mechanism of formation of diarylthiocarbamides, A., II, 56. Meso-derivatives of acridine. VI. Derivatives of 5-aminoacridine and 5-(dimethylaminophenyl)acridine. vIII. Preparation of 5-p-dimethylaminophenylacridines, A., II, 116, 211. Decomposition of aryldithiocarbamates, A., II, 184.

and Goldabenkov, M. K., lamp voltmeter, A., I, 99.

Drozdov, S. S., and Bistrov, S. P., determination of chlorides in meat products, B., 835.

Drozdova, Z. B. See Sosedov, N. J. Druce, J. G. F., preparation of hydrobromic acid solution of constant b.p., A., I, 528. Ethoxides and isopropoxides of manganese and rhenium, A., II, 396.

Drucker, C., ion equilibrium in heavy water, A., I, 306.

Drug Products Co. See Torigian, J.
Drukker, S. V. See Zinoviev, A.
Drumm, P. J., Scarborough, H., and
Stewart, C. P., chemical identification of ascorbic acid in urine, A., III, 459.

See also Stewart, C. P.Drummond, D. G., the 2-73 μ absorption band of fused silica, A., I, 112.

Drummond, J. C., and Hoover, A. A., vitamin-E (tocopherol), A., III, 497. See also Baker, (Miss) A.Z., and Trikojus, V. M.

Drummond, R. M., purifying or washing air or other gas, or cooling a liquid, (P.), B., 635.

Drury, D. R., Bergman, H. C., and Greeley, P. O., glucose utilisation of phloridzinised dogs after hepatectomy, A., III, 265.

See also Barnes, R. H.
Drushinin, A. E. See Tichomolov, P. A. Drushinina, O. See Weichherz, I. Drutel, H. See Meyer, André.

Druyvesteyn, M. J., mobility of electrons in neon, A., I, 387. Anode drop in the rare gases helium, neon, and argon,

A., I, 485. and Warmoltz, N., electron emission of an oxide-coated cathode in an arc discharge, A., I, 105. New dark space

near the cathode glow in an arc discharge, A., I, 105. See also Kruithof, A. A.

Druziakova, L. I. See Achumov, E. I. Dryden, W. See Dryden & Sons, T.

Dryden & Sons, Ltd., T., Dryden, W., and Jones, H. R., grinding, masticating, levigating, mixing, and similar mills, (P.), B., 1288.

Dschaparidse, D. See Schmidt, J. Dshjobadse, S. A. See Obnchovski, J. M. D'Silva, J. L., action of adrenaline on serum-potassium, A., III, 149. Action of adrenaline on the perfused liver, A., III, 149.

Dubaquié, J., determination of total sulphur dioxide in wines, B., 830.

Dubbs, C. P. See Universal Oil Products

Dubbs, L. A., treatment of convertible substance [hydrocarbon oil], (P.), B.,

Duberschtein, G. See Kozlov, N.

Dubey, V. S., and Bajpai, M. P., radioactivity of the Deccan traps. I. Basalts, A., I, 431.

Dubil, W. J., and Hubik, E. J., fresh meat, (P.), B., 978.

Dubilier Condenser Co. (1925), Ltd., electrolytic condensers, (P.), B., 937. Impregnating electric articles and devices, particularly electric condensers, (P.), B., 1364.

and Moore, N. C., electrolytic con-densers, (P.), B., 150. Electrolytic condensers and other electrolytic devices, (P.), B., 1230.

Dubinin, M., and Zaverina, E., preparation and porosity of active charcoals, B., 745.

Dubinski, A. P., and Kopilov, I. G., determination of sulphur [in steel] by Kassler's method, with addition of substances facilitating combustion, B., 1062. Application of Lang and Kurtz's method to determination of manganese in cast iron and steel, B., 1212.

Dubinski, N. See Schischigol, M. Dubinski, V. G. See Serb-Serbina, N. N. Dubkov, I. A. See Ipatiev, V. V., jun.

Dublianskaja, N. F., chemical characteristics of Euphorbia lathyris, L., as an oleaginous plant, A., III, 331.

Dublin, Department of Industry and Commerce Industrial Research Council, industrial heating appliances using turf (peat) as fuel. I. Lancashire boiler with turbine furnace. II. Loco-type boiler with Wollaston producer furnace. III. Waste wood burning furnace. IV. Magazinetype, central-heating boiler, B., 746.

Dubner, E. M., path of travel of gases in the coke oven, B., 7.

Du Bols, D. See Stern, K. G.

Dubois, G., complementary action of the vitamins; interrelation of the vitamins and the effect of minerals and endocrine glands, A., III, 323.

Du Bois, H. See John, Hans. Dubois, J. See Ungar, Georges.

Du Bois, R., ferric thiocyanate equilibria, A., 1, 533.

Dubois-Ferrière, H. See Zimmet, D. **Dnbos,** R., decomposition of yeast-nucleic acid by a heat-resistant enzyme, A.,

111, 314. and MacLeod, C. M., effect of a heatresistant enzyme on the antigenicity of pneumococci, A., III, 414.

See also Meyer, Karl, and Miller, B. F. Duboux, M., and Favre, R., ratio between the $p_{\rm H}$ and the velocity of decomposition of ethyl diazoacetate in organic media, A., I, §7.

Dubovitzkaja, E. I. See Jolson, L. M. Dubovitzki, A. M., Filinov, A., Verishnikov, P., Margolis, F., and Lunskaja, Z. N., granulation of ammonium nitrate, B., Ī31.

and Lunskaja, Z. N., preparation of complex fertilisers of the type of nitrophos and ammophos, B., 955.

Dubpernell, G., Arbor, A., Soderberg, K. G. and Udylite Process Co., brightening of metals electronegative to iron, (P.), B.,

Dubreuil, J. See Le Chuiton, F.

Du Bridge, L. A., Barnes, S. W., and Buck, J. H., proton-induced radioactivity in oxygen, A., I, 438.

See also Barnes, S. W., Hill, A. G., and Mann, M. M., jun.

Dubrisay, desulphurising motor fuel by absorption, B., 751.

Dubrisay, R., and Arditti, G., attack on metals by carbon tetrachloride in presence of water, A., I, 420.

and Gion, L. P. R., determination of carbon dioxide in closed atmospheres, A., I, 198.

and Saint-Maxen, A., basic lead acetates, A., II, 440.

Dubrovai, K. K., structure of organic compounds, A., I, 348. Vapour phase cracking of paraffin fraction of peat tar, B., 865.

Dubrovin, I. M., behaviour of arsenious anhydride volatilised together with other oxides in hot gases, B., 665.

Dubrovskaja, \tilde{I} . I. See Belozerski, A. N.

Dubrul, L. See Gilard, P.

Dubský, J. V., importance of colour reactions in analytical chemistry, A., I, 259. Application of organic reagents and complex compounds in analytical chemistry, A., I, 578. Modern ideas in analytical chemistry, A., I, 578. Relationships between scientific chemical work and microanalysis, A., I, 578.

and Hrdlička, M., micro-detection of aluminium, magnesium, and zinc 1-aminoanthraquinone-2-carb-

oxylic acid, A., I, 328.

Hrdlicka, M., and Soukal, V., formation of sparingly soluble substances in micro-analysis, A., I, 326.

Hrdlička, M., and Štěpán, K., salts of 1-aminoanthraquinone-2-carboxylic acid, A., II, 344.

 and Langer, A., two universal indicators,
 A., I, 43. Organic reagents in analytical chemistry. XI. Cobalt, A., I, 533. Organic reagents in analytical chemistry, A., I, 633. Colour reaction of glycine with ferric salts. I. and II., A., II, 9, 138. Colour reactions of sarcosine and alanine with ferric salts. III., A., II, 280.

Langer, A., and Wagner, E., ketimine compounds formed in microdetection of magnesium and beryllium, A., I, 319.

and Okac, A., A. Jilek's thiocarbamide reaction for detection of bismuth, A., 1, 634.

and Oravec, E., salts of sulphinie acids, R.SO₂H, A., II, 373.

Oravec, E., and Langer, A., use of sulphinie acids for determination of iron, A., I, 532.

and Wagenhoter, E., complex heavy metal halides, A., I, 95.

Dubuisson, M., p_H changes of muscle during and after contraction, A., III, 172. Impedance changes in muscle during contraction, and their possible relation to chemical processes, A., III,

Ducasse, J. See Quelet, R. Ducceschi, V., and Roncato, A., absorption of olive oil, A., III, 305.

Ducci, G. See Nuccorini, R.

Duce, W., elimination of phenol by animals receiving autoclaved food, A., III, 132.

Duch, G., determination of surface tension of a liquid by formation of drops at the bottom of a capillary tube in which the linear movement of the meniscus is observed, A., I, 153. Mechanico-chemical determination of mol. wt. of liquids boiling at constant pressure, A., I, 291. Variations in mechanico-chemical constants of benzene hydrocarbons along the vaporisation curve from the origin to 74.5 cm. of Hg, A., I, 453.

Duchêne, R., determination of the calorific value of gas, B., 1296.

Duchesne, J., potential constants of tetrachloroethylene, A., I, 224, 286. Calculation of the vibration frequencies of the N₂O₄ molecule, A., I, 344.

Duchon, R., yield of thoron by the "gas-flow" method, A., I, 489.

Duckert, R., organic reagents capable of application to mineral analysis. I. 2:3:7-Trihydroxy - 9 - methyl - 6 - fluorone, special reagent for antimony cations, A., I, 330.

Duckham, A., and Duckham & Co., A., upper-cylinder lubricants, (P.), B., 413. Duckham & Co., Ltd., A. See Duckham,

Duckles, D. See Williams, R. D. Duclaux, J., determination of absorption coefficients of the atmosphere. I. and II., A., I, 330, 341. Chemical theory of gases. III. The molecules (O2)2 and (NO)2, A., I, 506. and Amat, M., carborundum ultrafilters,

A., I, 584.

Duclaux, J. P. E., anodic polarisation of tungsten, A., I, 415. Dudavski, I. E. See Tereschtschenko,

Duddridge, G. K. See Imperial Chem.

Industries. Dudinski, M. N., and Nikiforov, V. K. calculation of calorific value of liquid

fuels, B., 517.

Dudklna, T. See Lutenberg, A.

Dudley, H. C., and Miller, J. W., toxicology of selenium. IV. Toxicity of hydrogen sclenide, A., III, 479.
Dudley, J. F. See Standard Oil Develop-

ment Co. Dücker, H. von, calculation of assimilation

[of carbon dioxide by green leaves] by Boysen-Jensen's method, A., III, 329. Duecker, W. W., sulphur cements, B.,

and Payne, C. R., plastic bodies containing olefine polysulphides, (P.), B.,

Payne, C. R., and Texas Gulf Sulphur Co., refining of olefine sulphide[s], (P.), B., 1171. Plastic body, (P.), B., 1239.

and Texas Gulf Sulphur Co., treatment of sulphur, (P.), B., 669. See also Schwab, J. W.

Dümlein, K. See Chrometzka, F. Duemmling, F. C. See Uhlig, H. H. Düpmann, unfritted leadless glaze, B.,

Dürr, H., zinc from Firiza lead slags, B.,

Duesel, B. F. See Renshaw, R. R. Dufay, J., nitrogen in spectra of comets, A., I, 207.

Bloch, (Mlle.) M., and Ellsworth, J., emission of CO+ bands from the head of the Peltier comet (1936, a), A., I, 215.

See also Cabannes, J.

Du Feu, E. C., McQuillin, F. J., and Robinson, R., synthesis of substances related to the sterols. XIV. Simple synthesis of certain octalones and ketotetrahydrohydrindenes which may be of angle-methyl-substituted type; a theory of the biogenesis of the sterols, A., II, 196.

Duff, G. L. See Nachlas, A. Duff, V. B. See Bodansky, M. Duffau, R., influence of avitaminosis-B on composition of pigeon muscle, A., III, 153. Variation in the phosphorus and carbohydrate derivatives of rat's muscle during experimental rickets and its cure, A., III, 206. Effect of avitaminosis-C on the carbohydrate metabolism of guinea-pig muscle, A., III. 326.

See also Lecoq, R.

Duffell, S., diffusion and its relation to ore deposition, A., I, 586.

Duffendack, O. S., and Gran, W. H., regularity along a series in variation of the action cross-section with energy discrepancy in impacts of the second kind, A., I, 386.

and Thomson, K. B., developments in the quantitative spectrographic analysis of solutions, A., III, 192.

See also Thomson, K. B. Duffey, H. R. See Chilton, T. H.
Duffeux, M. See Jausseran, C.
Dufour, J. See Nattan-Larrier, L.
Dufraisse, C., and Le Bras, J., dissociable

organic oxides; photo-oxide of mesodiphenylanthracene: formation, dissociation, and properties; action of oxidising agents on meso-diphenyl anthracene: two stereoisomeric mesodihydroxides, A., II, 332, 374.

and Priou, R., dissociable organic oxides; the photo-oxide C₁₆H₁₄O₄ of 9:10-dimethoxyanthracene, A., II, 145.

Velluz, L., and Velluz, (Mme.) L., dissociable oxides of anthracenes; 9-phenylanthracene and its derivatives, A., II,

Dufrency, J., deficiency diseases of plants, B., 958. Diseases of sugar beet, sugar cane, and cotton, B., 958. Seed disinfection, B., 1388. and Reed, H. S., staining cells with

Sudan III in a water phase, A., II, 287. and Vezian, representation of biochemical and epidemiological reactions by Pearson's curve IV, A., III, 484.

Dugal, L. P., and Irving, L., secretion of calcium carbonate by hermetically scaled Venus mercenaria, A., III, 131.

Dugan, B. B. See Marriott, R. H.
Duguenols, M. P., steric hindrance. I.
Non-saturation index in the cinnamic series, A., II, 101.

Duhamel, J. See Delarozière, F.

Duimshitz, A., naphthenic acids in soapmaking, B., 364.

Duke, F., Lewis, H., and Dunbar, R. E., preparation of bromomesitylene, A., II, 489.

Duke-Elder, W. S. See Benham, G. H. Dukes, H. H., energy metabolism of the hen, A., III, 464.

Dukler, N. D. See Tscherkes, L. A. Dulac, J. See Maume, L.

Dulaney, A. D. See Deere, C. J.

Dulière, W. L., and Adant, M., relationship between globular volume and concentration of iron; significance of the hæmatocrit value, A., III, 2.

Dullere, W. L., and Minne, R., retention of trichloroacetic acid by human serum-proteins, A., III, 371. Titrimetric determination of the proteins in human serum, A., IlI, 371.

Dulin, T. G. See Holley, K. T.

Dulitzkaja, R. A., and Sokolov, S. I., isoelectric point of gelatin, B., 592.

Dulken, C. F., subsequent treatment of yarns, (P.), B., 664.

Dullenkopt, W. Sce Köster, W.

Dulowski, J. Sce Bakowski, S.

Dulowski, J. See Bakowski, S.

Dultz, G., [cod-]liver oil, B., 1082.

Dumanois, P., and Desbrosse, G., classification of heavy [oil] fuels; relation between the cetene number and ignition delay, B., 751.

Dumanski, A. V., Charin, S. E., and Maltzev, P. M., determination of colloids in

beer, B., 606.

and Dumanski, O. A., determination of the sign of electric potential and isoelectric point of thin fibres, A., I, 29.

Krjatschkov, N. N., and Leisle, E. G. influence of glues on cracking of wetted

powders. II., B., 736. and Ostrikov, M. S., analysis of heterocapillary systems in non-swelling

bodies, A., I, 235. and Tschapek, M. V., colloid-chemical researches on the water properties of peat, B., 310.

Dumanski, O. A. See Dumanski, A. V. Dumas, J., oxycellulose, A., II, 401. Action of light on textile fibres, B., 533.

Dumble, C. R. See Fitger, A. K. Dumbrell, J. W. See Monro, W. E.

Dumbrell, J. W. See Moiro, W. E.

Dumesnil, P., tests on cements for marine works, B., 442. Slag cements, B., 553.

Duminy, J. P. See Tromp, F. J.

Dumitrescu, E. See Rougiehitch, O. S.

Dummett, G. A. See Greenfield, G. J.

Du Mond, J. W. M., and Bollman, V.,

determination of h/e from short wavelength limit of the continuous X-ray spectrum, A., I, 214.

and Kirkpatrick, H. A., direct spectrum of structure and shift of the Compton line with helium gas as scatterer, A., I,

590.

and Marlow, D., precision two-crystal Xray spectrometer; improved method of equalising the spacing of wormwheel teeth, A., I, 331.

Dumoulin, E. See Dautrebande, L. Dunaev, J. A., determination of mechanical properties of welded joints by means of X-ray examination, B., 355.

Dunant, Y. See Fourneau, E., and Tréfouël, J.

Dunbar, A. See Culbertson, J. L.
Dunbar, C. See Imperial Chem. Industries.
Dunbar, R. E., macro- or micro-Gooch filter, A., I, 480.

See also Duke, F. Dunbar, T. L., and Chemipulp Process, treatment of fibrous material, (P.), B., 657. Digestion [of fibrous material],

(P.), B., Ĭ190. Duncan, A. B. F., far ultra-violet absorption spectrum of N₂O, A., I, 7. Ultraviolet absorption spectrum of ammonia. III. Absorption spectra of the deuterammonias; Rydberg series in ammonia, A., I, 7.

Duncan, C. W., and Huffman, C. F. vitamin-Dstudies in cattle. III. Influence of solar ultra-violet radiation on blood chemistry and mineral metabolism of calves, A., Ill, 406.

Duncan, C. W., and Miller, E. J., results of feeding various levels of soil containing beryllium to chickens, dogs, and rats, A., III, 263.

See also Bechtel, H. E.

Duncan, I. J., and Dustman, R. B., determination of coumarin in sweet clover; steam distillation and alcoholic-extraction, A., III, 503. Determination of coumarin in vanilla extract by a modification of the steam-distillation method, B., 1406.

Duncan, J. R. M., and McQuarrie, D., softeners in [rubber] cable insulation, B., 373.

Duncan, J. T., inactivation of "H" antigen by dilute mineral acid, A., III, 116. Salt optimum in antibody-antigen reactions, A., III, 250.

Duncan, S., use of the hand refractometer in estimating maturity of cane, B., 379.

Duncan Stewart & Co., Ltd., and Talbot-Crosbie, J. B., [hollow] ammunition shell and similar cases, (P.), B., 1138.

Dundas, W. A., and Harrington, P., disposal of sewage [sludge] and other municipal waste, (P.), B., 94.

Dundur, E. I. See Kantor, M. I., and Tscharova, A.

Dunème, L., filters for protection against gas, dust, arsines, toxic fumes, and liquids sprayed in the atmosphere, (P.), B., 996.

Dunez, A. See Demolon, A.

Dungern, M. F. von, polarisation optics and minute structure of coagulated fibrin, A., III, 296.

Dunham, K. C., paragenesis and colour of fluorite in the English Pennines, A., I,

Dunham, T., jun., forbidden transition in the spectrum of interstellar ionised titanium, A., I, 158.

Dunicz, B. L. See Kemula, W.
Dunker, C. F., Fellers, C. R., and Fitzgerald, G. A., stability of vitamin-C in sweet maize to shipping, freezing, and canning, B., 832.

Dunker, L. H. A., charcoal-making plants, (P.), B., 519.

Dunker, M. F. W., Starkey, E. B., and Jenkins, G. L., preparation of organic mercurials from diazonium borofluorides, A., II, 39.

Dunkin, G. W. See Laidlaw, P. P.

Dunlap, G. C., and Trump, J. G., thermocouple gauge for vacuum measurement, A., Î, 151.

Dunlop, D. M., and Arnott, W. M., effect of succinic acid on diabetic ketosis, A., III, 461.

and Scarborough, H., specific effect of ascorbic acid on anæmia of scurvy, A., III, 122.

See also Lyon, D. M.

Dunlop, Ltd., W. & J., and McQueen, R. G., blood product, (P.), B., 617.

Dunlop Rubber Co., Ltd., Twiss, D. F., and Jones, F. A., vulcanisable compositions of rubber, etc., (P.), B., 266. Ward, A. N., and Trobridge, G. W., concentrating of [rubber] latex, (P.),

and Willshaw, H., moulding and vulcanising and apparatus therefor, ap-

plicable particularly to pneumatic-tyre manufacture, (P.), B., 1246.

Dunlop Tire & Rubber Corporation, vulcanised cellular rubber and vulcanisation accelerators therefor, (P.), B., 1093.

Dunn, C. G., antiseptic power of mixtures of benzyldimethylalkylammonium chlorides, A., III, 183.

Dunn, E. E., and Morgulis, S., catalase and peroxidase activity of the liver cell, A., ÎII, 219.

Dunn, J. O. See Gellhorn, E.

Dunn, J. S. See Imperial Chem. Industries.

Dunn, J. T., and Bloxam, H. C. L., unusual adulterant for pepper, B., 493. See also Fieser, L. F.

Dunn, Martin S., effects of certain glandular

products on plant growth, A., III, 160. Dunn, Max S., and Weiner, J. G., amino-acids and peptides. III. Apparent acid dissociation constants in aqueous formaldehyde solution, A., I, 135. See also Butts, J. S.

Dunn, R. W., and Salle, A. J., rice bran extracts and growth of micro-organisms,

A., III, 37.

Dunn, W. C. See Denneen, F. S.

Dunnicliff, H. B., chemistry of Indian opium, A., III, 350. See also Hamid, M. A.

Dunning, J. R., Pegram, G. B., Mitchell, G. A., Fink, G. A., and Segrè, E., velocity of slow neutrons, A., I, 389. Powers, P. N., and Beyer, H. G., mag-

netic properties of the neutron, A., I, 107.

See also Fink, G. A., and Powers, P. N. Dunningham, A. C., and Grumell, E. S., coal storage, B., 310.

Dunnington, F. G., determination of e/mfor an electron by a new deflexion method. II., A., I, 595.

Dunsheath, P., lead-extrusion phenomenon, B., 684. Continuous extrusion of lead cables, B., 795.

See also Henley's Telegraph Works Co., W. T.

Dunstan, A. E. See Anglo-Iranian Oil Co. Dunstan, G. G., cheese mites and their control, B., 834.

Dunton, A. R., moulded plastics for general engineering purposes, B., 943.

Dupas, J. See Lespagnol, A. Duperier, A., and Vidal, J. M., electrical conductivity of air in Madrid, A., I, 584. Dupic, H. See De Guillebon, and Lemolgne, M.

Duplato Corporation. See Haux, E. H., and Kamerer, J. W.

Du Plessis, S. J., control of Botrytis rot in grapes, B., 714.

Dupont, G., composition of turpentine from Dutch East Indies, B., 1371.

and Desreux, V., β-myrcene; catalytic hydrogenation, A., II, 27. Spectrographic and chemical study of some aliphatic terpenes. I. Myrcene and its hydrogenation products, A., II, 200. Slawinski, K., and Zacharewicz, W.,

pyrolysis of myrtenyl selenide, A., II, 381.

Dupont, R., autoxidation of cyclic ethylenic

hydrocarbons. II., A., II, 236.

Du Pont Cellophane Co., Inc. See Charch,
W. H., Coleman, C. E., Haskins, J. F., Siemann, J. C., and Snyder, J. E.

Du Pont de Nemours & Co., E. I., meth-acrylate resins, B., 61. Lake colours, (P.), B., 65. Lubricating oils, (P.), B., 115. Anthrimide carbazole [vat] dyes [containing a benzacridone nucleus], (P.), B., 123. Coating of flexible sheet materials [production of patent leather], (P.), B., 131.

Du Pont de Nemours & Co., E. I., agricultural spray materials, (P.), B., 172. Dyeing and printing of textile materials [with ice colours] and dyepreparations therefor, (P.), B., 232. Glues, pastes, and similar adhesives, (P.), B., 277. Apparatus for casting materials which contract during solidification, especially polymerisable organic liquids, (P.), B., 303. Emulsions, (P.), B., 321. Dispersions of halogenobutadienes, (P.), B., 325, 416. [Waterproofing] coloured paper, (P.), B., 334. Moisture-proofing of nonfibrous cellulose sheets or films, (P.), B., 334. Emulsions [for coating paper, etc.], (P.), B., 335. Concentrated nitric acid, (P.), B., 341. Colouring agents for glass batches and their employment, (P.), B., 346. Chitin compounds, (P.), B., 370. Dispersion of solids in liquids, (P.), B., 370. Compositions and coated or impregnated materials, (P.), B., 371. Stabilisation of motor fuels, (P.), B., 412. Cellulose derivatives, (P.), B., 428. Hydrocyanic acid, (P.), B., 436. Polishing wax compositions, (P.), B., 465. Thermoplastic resins, (P.), B., 471. Cast synthetic resins [from methyl methacrylate, etc.], (P.), B., 471. [Resinous] compositions [and fibres], (P.), B., 471. Baked cereal products, (P.), B., 495. Polymeric amides, (P.), B., 527. Insoluble azo-compounds [dyes], (P.), B., 532. Catalytic materials, (P.), B., 667. Alkyl chlorides, (P.), B., 757. Organic mercury compounds, (P.), B., 843. Intermediates [urethanes] and azo-dyes derived there-from, (P.), B., 882. [Vat] dyes of the indanthrone series, (P.), B., 886. Electrolytic production of metals [sodium], (P.), B., 907. Cleaning interior surfaces of heat exchangers, etc., (P.), B., 991. Esters of ortho-phosphoric acid, (P.), B., 1170. Metal alkyl compounds, (P.), B., 1180. Alkali-cellulose particularly useful for making cellulose esters or ethers, (P.), B., 1190. Stabilisation of animal and vegetable fats and oils, (P.), B., 1235, 1236*. Cleaning interior of enclosed spaces by volatile grease solvents, (P.), B., 1291. Cyclic esters, (P.), B., 1311. Ammonium nitrate in granular form, (P.), B., 1337. Lead-sodium alloy, (P.), B., 1360. Electrolytic processes and apparatus [for production of per-compounds], (P.), B., 1364. Polymerisation of methacrylic acid esters, (P.), B., Synthetic resins, (P.), B., 1372. 1376.

and Acken, M. F., concentration of sulphuric acid, (P.), B., 341. and Adamson, W. A., pigments, (P.),

B., 264.

and Allemann, O., thioflavine T, (P.), B., 1031.

Alt, C. A., Nollau, E. H., and Rankin, D. A., coated fabrics, (P.), B., 338.

and Amend, W. J., tolylcarbinol, (P.), B., 529. Catalytic hydrogenation of aromatic aldehydes, (P.), B., 651.

Amick, M. G., Lawrence, J. C., and Stecher, J. L., [lead-sodium alloy for preparation of alkylated lead, (P.), B., 691.

Du Pont de Nemours & Co., E. I., and Anderson, Harold W., aroyl chlorides of the benzene series, (P.), B., 879.

and Arnold, H. R., ketone condensation

products, (P.), B., 761.

Arnold, H. R., and Lazier, W. A.,
[a hydrogenation or dehydrogenation]

catalyst, (P.), B., 543. and Arvin, J. A., [pentaerythritol ester] product [coating composition], (P.), B., 159. Resinous compositions, (P.), B., 1241. and Atkins, S. A., coated textile material,

(P.), B., 234.

Austin, P. R., and Bousquet, E. W., chlorination of phthalide and further treatment of the chlorination product, (P.), B., 879.

and Bake, L. S., formation of leucocompounds [of vat dyes], (P.), B., 123. Lead tetra-alkyl, (P.), B., 215.

Bake, L. S., and Parmelee, A. E., recovery of alkyl lead compounds from their reaction masses, (P.), B., 419.

and Baker, S. G., jun., explosive composition, (P.), B., 1412.

and Baker & Co., catalysis [oxidation of

ammonia], (P.), B., 437.

Barrett, H. J., and Lazier, W. A., naphthenyl esters of polycarboxylio acids, (P.), B., 879. Alicyclic carbinol esters of polycarboxylic acids, (P.), B., 879.

Barrett, H. J., and Strain, D. E., esters of methacrylic acid, (P.), B., 758, 1021. Esters of methacrylic acid, their manufacture and applications, (P.), B., 1021.

and Beard, E. E., 1-nitroanthraquinonyl-6-amino-compounds [1-nitro-6-carboxylamidoanthraquinones; vat dyes], (P.), B., 653. Carbon compounds [and dyes] of the anthraquinone series, (P.), B., 880.

Beard, E. E., and Rintelman, W. L., thiazole compounds [of the naphthalene and anthraquinone series], (P.), B., 1025.

and Black, C. K., azo-dyes, (P.), B.,

and Bolton, E. K., synthetic resins, (P.), B., 946. Purification of cotton linters, (P.), B., 1322.

Bond, H. A., and Harris, C. R., hydrocyanic acid, (P.), B., 237.

Bond, H. A., and Scott, N. D., dehydration of formamide to produce hydrocyanic acid, (P.), B., 526.
and Booge, J. E., blended [titania] pigment, (P.), B., 1089.

and Bousquet, E. W., hydroaromatic alcohols [hexahydro-o-phthalyl alcohol], (P.), B., 651.

and Brooks, C. W., jun., black powder composition, (P.), B., 190. and Brubaker, M. M., composition con-

taining castor oil derivative, (P.), B., 65. Oil derivative, (P.), B., 65. [Alkyd] synthetic resin, (P.), B., 471.

Brubaker, M. M., and Thomas, R. E., amine-modified polyhydric alcoholpolybasic acid resins, (P.), B., 1374.

Burk, R. E., and Lankelma, H. P., cracked distillates of petroleum, (P.), B., 1162.

Calcott, W. S., and Clarkson, R. G., chemical compounds [textile assistants], (P.), B., 1313. Quaternary ammonium compounds [textile assistants], (P.), B., 1313.

Du Pont de Nemours & Co., E. I., Calcott, W. S., and Douglass, W. A., catalysts for oxidation reactions, (P.), B., 543. Compounding of rubber, (P.), B., 815.

Calcott, W. S., and Reynolds, H. H., moulding compositions, (P.), B., 468.
Calcott, W. S., Tisdale, W. H., and Flenner, A. L., insecticidal spray materials, (P.), B., 715.

and Cambron, A., mercapto[aryl]thiazole compounds, (P.), B., 880. and Carleton, P. W., triphenylmethane

dyes, (P.), B., 653.

Carleton, P. W., and Mattison, E. L., monoalkylnaphthylamines, (P.), B., 527. Partial dealkylation of dialkyl aromatic amines, (P.), B., 527.

and Carlisle, P. J., refining of hydro-carbon oil, (P.), B., 1303.

and Carothers, W. H., halogenobuta-dienes, (P.), B., 416. Hydrogen polysulphide addition products of unsaturated aliphatio hydrocarbons, (P.), B., 1310. Carothers, W. H., Collins, A. M., and

Kirby, J. E., chemical products [polymerides from β -chloro-ay-butadiene], (P.), B., 157.

and Carpenter, G. B., carboxylic acids,

(P.), B., 1172.

Carter, A. S., and Downing, F. B., vinylacetylene, (P.), B., 876. Sulphurised unsaturated aliphatic hydrocarbons, (P.), B., 1310.

and Cass, O. W., chlorine derivatives of unsaturated hydrocarbons, (P.), B., 1019, 1310. Chlorinated hydrocarbons, (P.), B., 1309. Clarkson, R. G., and Pedersen, C. J.,

non-corrosive aqueous solutions, (P.), B., 995.

and Coffelt, O. T., titanium product, (P.), B., 1089.

and Cole, J. E., aryl mercaptans and derivatives thereof, (P.), B., 217.

and Dahlen, M. A., water-soluble diazoimino-compounds, (P.), B., 216, 1026. N-Substituted aminophenols, (P.), B., 217. Azo-dyes [pigments and ice

colours], (P.), B., 1027.

Dahlen, M. A., Clapp, H. G., and Jordan, S. B., o-nitroanisole, (P.), B., 1176.

Dahlen, M. A., and Cole, J. E., azo-dyes [pigments and ice colours], (P.), B.,

Dahlen, M. A., Detrick, S. R., Etzel-miller, R. E., and Zwilgmeyer, F., diazoimino-compounds, (P.), B., 1175. Dyeing process [with stabilised diazo-compounds], (P.), B., 1329.

Dahlen, M. A., and Etzelmiller, R. E., azo-dyes, (P.), B., 884.
Dahlen, M. A., and Fleck, E. E., p-

chloro-o-nitroanisole, (P.), B., 1176.

Dahlen, M. A., and Zwilgmeyer, F.

[water-insoluble]azo-dyes[ice colours], (P.), B., 1317.

and Deinet, J., [sulphide vat] dyes of the anthraquinone series, (P.), B., 1029.

and Dettwyler, W., intermediates and dyes of the anthraquinoneacridone series, (P.), B., 329. Dyes of the anthraquinone series, (P.), B., 886. Dyes of the flavanthrone series, (P.), B., 1029.

Dietrich, M. A., and Marvel, C. S.,

phthalide halide, (P.), B., 1178. Dietz, J. B., and Oeffinger, E. F., varnish composition, (P.), B., 159.

Du Pont de Nemours & Co., E. I., Downing, F. B., and Clarkson, R. G., chemical product [wetting, penetrating, and dispersing agent], (P.), B., 233. Alkaline wetting and penetrating media, (P.), B., 233. Sulphonated derivatives of aliphatic hydrocarbons useful as wetting and cleansing agents. (P.), B., 1309.

Downing, F. B., and Pedersen, C. J., alkali selenides and tellurides, (P.), B.,

Downing, F. B., and Walker, H. W., stabilisation of mineral hydrocarbon products, (P.), B., 17.

and Dykstra, H. B., rubber products, (P.).

B., 1379.

and Eatough, H., condensation products of polyhydric alcohols of high mol. wt. [waxes], (P.), B., 588. and Ellsworth, D. C., cellulose ethers,

(P.), B., 1323.

and Engelmann, M., thiazolino compounds, (P.), B., 88. Oxazolino compounds, (P.), B., 88. Alkylaminoalkoxybenzthiazoles, (P.), B., Trifluoromethylbenzeneazodiaminopyridines, (P.), B., 653.

and Etzelmiller, R. E., esters of N-paminoarylearbamic acids, (P.), B., 120. Azo-dyes, (P.), B., 531. Foohey, W. L., and Peck, F. W., aryl-

amines of the benzene series, (P.), B.,

Fothergill, R. E., and Haskins, J. F., cellulose derivatives, (P.), B., 1191. and Gilbert, H. N., separation of metals,

(P.), B., 1072.

and Graham, D. P., intermediates and dyes of the anthraquinone series, (P.),

B., 121.

- and Graves, G. de W., styrene, (P.), B., 419. Xanthates [of higher primary alcohols], (P.), B., 526. Hydrogenation of aroylaromatic acids and their derivatives, (P.), B., 1024. [Phenyl] esters of methacrylic acid, (P.), B., 1173. Hydrogenated rubber, (P.), B.,
- Graves, G. de W., and Werntz, J. H., higher alkyl borates and silicates, (P.), B., 1020.

and Greenewalt, C. H., keten, (P.), B.,

Gubelmann, I., and Rintelman, W. L., anthraquinone selenium-containing compounds [anthraquinonebis-selenazoles; vat dyes], (P.), B., 1030. and Hall, C. B., non-piping high-glazed

coated fabric, (P.), B., 1332. and Hanahan, M. L., titanium oxide pigment of fine texture, (P.), B., 1089. Handforth, S. L., and Tilley, J. N.,

concentrated nitric acid, (P.), B., 1046. and Hansley, V. L., dialkyl glycols, (P.), B., 220*. Keto-alcohols, (P.), B., 220*.

Hansley, V. L., and Scott, N. D., synthetic resin, (P.), B., 263.

and Haskins, J. F., esterification of cellulose, (P.), B., 333.
and Heckert, W. W., finely-divided

calcium sulphate, (P.), B., 1047. Henke, C. O., and Zartman, W. H.,

amides of higher fatty acids, (P.), B., 1174.

and Hetherington, H. C., synthesis of urea, (P.), B., 418.

and Hinegardner, W. S., paraform-aldehyde, (P.), B., 418.

Du Pont de Nemours & Co., E. I., Hitch, E. F., Dahlen, M. A., and Friedrich, M. E., azo-dyes [pigments and ice colours], (P.), B., 883, 1027.

Holmes, F. B., Wuertz, A. J., and Lycan, W. H., violanthrone [di-

benzanthrone] derivatives [vat dyes], (P.), B., 1028. and Holt, D. A., nitriding [of steel], (P.),

B., 800.

and Holt, H. S., plasticised [cellulose derivative] composition, (P.), B., 262. Propionic acid esters [of polyglycols], (P.), B., 325. Cellulose derivative compositions, (P.), B., 947. Monocarboxylic esters, (P.), B., 1241. and Howell, E. T., vat dyes of

the dibenzanthrone series, (P.), B.,

and Hulse, R. E., light metals [sodium, etc.], by electrolysis, (P.), B., 907. and Hunt, J. K., impervious [oiled] fabric, (P.), B., 776.

Hunt, J. K., and Latham, G. H., cellulose derivative compositions, (P.), B., 813.

and Hunter, A. S., articles of manufacture [wrapping tissues which absorb

ultra-violet light], (P.), B., 1325.
and Hutton, D., aromatic p-aminoaldehydes, (P.), B., 879.
and Izard, E. F., esters of methacrylio
acid, (P.), B., 1172. [Plasticisers for] cellulose derivative compositions, (P.), B., 1243.

and Johnson, F. W., compounds of the N-dihydro-1:2:2':1'-anthraquinoneazine series, (P.), B., 224. Derivatives of N-dihydro-1:2:2':1'-anthraquinone-azine, (P.), B., 224. Esters of boric acid [textile assistants], (P.), B., 649. Dyes of the anthraquinone [indanthrone] series, (P.), B., 1182.

Johnson, Norman G., and Lewis,

H. A., explosive composition, (P.), B., 296.

and Jordan, Henry, [dis]azo-dyes [for

weighted silk], (P.), B., 1026:

Jordan, Henry, and Dahlen, M. A.,
monoazo-dyes [for acetate silk], (P.), B., 883, 1027. Azo-dyes [for acetate silk], (P.), B., 1027. and Kharasch, M. S., addition of a

hydrogen halide to a compound containing an olefinic linking, (P.), B., 1169, 1309.

Kirst, W. E., and Woodbury, C. A., explosive, (P.), B., 296. and Klein, D. X., anthraquinone com-

pounds, (P.), B., 218. and Kleinschmidt, R. V., conversion process and apparatus for catalytic

chemical reactions, (P.), B., 991. and Krchma, I.J., reduction of titanium

sulphate liquors, (P.), B., 1202.
and Larson, A. T., organic acids from ketones, (P.), B., 417. Organic acids, (P.), B., 525. Methyl alcohol and other carbon compounds and catalytic agents for use therein, (P.), B., 1310. Hydrocyanic acid, (P.), B., 1336. and Lawrence, J. C., hydrofluoric acid,

(P.), B., 436. Concentrated hydro-

fluoric acid, (P.), B., 1201. and Lawson, W. E., silicon esters of modified polyhydric alcohols, (P.), B., 877. Esters [and ethers] from halogenated paraffins, (P.), B., 877. Cellulose derivative composition, (P.), B., 947.

Du Pont de Nemours & Co., E. I., and Lazier, W. A., packing [for] fluid seals, (P.), B., 6. Hydrogenation of aliphatic alcohols and esters, (P.), B., 21. Polyhydric alcohols, (P.), B., 524. Ethylene glycol, (P.), B., 1311. Lazier, W. A., and Vaughen, J. V.,

hydrogenation of sulphur compounds,

(P.), B., 526.

and Lenher, S., flotation of minerals, (P.), B., 934. Compounds of basic dyes with sulphuric acid ester salts, (P.), B., 1026.

Levine, A. A., and Bond, H. A., halo-genated hydrocarbons [hexachloro-

ethane], (P.), B., 416.

Levine, A. A., and Cass, O. W., chlorinated hydrocarbons, (P.), B., 1309.

and Lindsley, M. F., jun., smokeless powders, (P.), B., 296.
Loder, D. J., and Walker, K. E., addition compounds of dimethyl ether [with metal chlorides], (P.), B., 1021. Lubs, H. A., and Cole, J. E., chlorinated

arylthiazoles, (P.), B., 1025. Manufacture and application of vat dye compositions, (P.), B., 1041.
Lubs, H. A., and Fox, A. L., organic

fluorine [benzthiazole] compounds, (P.), B., 220. ar-Tetrahydronaphthylthioureas, (P.), B., 1175. ar-Tetrahydronaphthothiazoles, (P.), B., 1179. Unsymmetrical fluorophenylthioureas, (P.), B., 1314.

Lubs, H. A., Hitch, E. F., and Dahlen, M. A., azo-dyes [pigments and ice colours], (P.), B., 1027.

and Lulek, R. N., carbon compounds of the 1:9-anthrathiophen scries, (P.), B., 880. Anthraquinono derivatives [anthraselenazoles], (P.), B., 881. Lulek, R. N., and Belcher, C.

intermediates and dyes of the anthr-

imidine type, (P.), B., 651.
and Lycan, W. H., compounds [vat dyes] of the violanthrone [dibenzanthrone] series, (P.), B., 1183. [Derivatives of] dibenzanthrones [vat dyes], (P.), B., 1183.

and Macallum, A. D., dehydration of

[cyanide] solutions, (P.), B., 237.

McBurney, D., and Nollau, E. H., cellulose derivative-coated fabric [for use in book-binding], (P.), B., 335. Inks, (P.), B., 947. and McGill, R., aminoguanidine, (P.),

B., 326.

and Magill, P. La F., rubber latex composition, (P.), B., 474. Cellulose acetate compositions, (P.), B., 813. and Marvel, C. S., fuel, (P.), B., 211.

Stabilisation of animal and vegetable

fats and oils, (P.), B., 1083. and Meuly, W. C., perfume-emitting [soap] materials, (P.), B., 465.

and Muskat, I. E., butadienes and chlorinated derivatives thereof, (P.), B., 416. and Nicoll, W. D., cellulose treatment [for reduction of solution-viscosity], (P.), B., 333.

Nieuwland, J. A., and Sowa, F. J., esters, (P.), B., 417. Boron compounds and their use as catalysts, (P.), B., 543.

and Nollau, E. H., pigment paste, (P.),

Ott, K., Bernard, H., and Frick, F., resinous bodies and varnishes obtained therewith, (P.), B., 701. and Parrett, A. N., baking enamels, (P.),

B., 1090.

Du Pont de Nemours & Co., E. I., Peck, F. W., and Sachs, J. H., benz-

anthrones, (P.), B., 219.

Peck, F. W., and Sobatzki, R. J., halogenation of N-dihydro-1:2:2':1'-anthra-

quinoneazines, (P.), B., 1317. and Perkins, M. A., organic [benzanthrone-]tellurium compounds, (P.), 219. Compounds [dye intermediates] of the benzanthrone series, 1315.

(P.), B., 1315. 2-Halogenobenz-anthrones, (P.), B., 1315. and Pranke, E. J., cooling of molten material [cyanide], (P.), B., 342. Removal of water from [sodium] cyanide, (P.), B., 779.

Rankin, D. A., and Uhler, F. G., casein

dispersion, (P.), B., 158. and Reichert, J. S., removal of acid from [hydrogen] peroxide solutions, (P.), B., 36. Storage and handling of hydrogen peroxide solutions, (P.), B.,

Reichert, J. S., and Elliott, R. B., bleaching by hydrogen peroxide, (P.), B., 1328.

Reichert, J. S., McAllister, R. W., and Hinegardner, W. S., preservation [of cream], (P.), B., 1405.

and Reid, E. E., esters of unsaturated acids, (P.), B., 213.
and Rigby, G. W., cellulose derivative, (P.), B., 28. Process of making carbohydrate derivatives [cellulose sulphate], (P.), B., 333.

and Rittmeister, W., hydrogenising and splitting of coal, tars, mineral oils, etc., (P.), B., 112.

and Roskosky, S. J., baking enamels, (P.), B., 1090.

and Rothrock, H. S., [oleoresinous] varnish, (P.), B., 813. Synthetic resins, (P.), B., 1374. and Sala, C. J., textile printing [assist-

ants], (P.), B., 900.

and Salzberg, P. L., [plasticisers for] cellulose derivative compositions, (P.),

B., 472. Salzberg, P. L., and Meigs, F. M., cellulose derivative compositions, (P.), B.,

and Scheller, E., [bleaching of] cellulose,

(P.), B., 31.

and Scott, N. D., reacting alkali metals with aromatic hydrocarbons, (P.), B., 119. Synthetic resin, (P.), B., 263. Refining of hydrocarbons, (P.), B., 874. Reactions of sodium with hydrocarbons, (P.), B., 1170. [Plasticisers for] cellulose derivativo compositions, (P.), B., 1243. Esters of dihydronaphthalenedicarboxylic acids, (P.), B., 1314.

Scott, N. D., and Walker, J. F., hydrogenated products [of naphthalene, etc.], (P.), B., 1174. Polycyclic aromatic

monocarboxylic acids, (P.), B., 1177. and Sly, C., resinous composition [from

proteins], (P.), B., 263. and Smith, F. H., brown [basic] disazo-

dyes, (P.), B., 1027. Sobatzki, R. J., and Kinahan, J. C.,

dimethoxydibenzanthrone, (P.), B., 532. and Sparks, W. J., refining of hydrocarbons, (P.), B., 874. Stecher, J. L., Amick, M. G., and Daniels, C. E., solid comminuted material, (P.), B., 740.

Stott, P. H., and Beard, E. E., vat dye printing paste, (P.), B., 1041.

Du Pont de Nemours & Co., E. I., and Strain, D. E., [permanent sizing of] textile material, (P.), B., 1330. Flexible article, (P.), B., 1372.
Tinker, J. M., and Weinmayr, V. M.,

separation of isomeric chloromethyl-

anthraquinones, (P.), B., 218.
Tisdale, W. H., and Bake, L. S., combined fungicidal and insecticidal spray materials, (P.), B., 715. Tucker, C. W., and Dorrill, F., distil-

lation [for production of hydrogen

peroxide], (P.), B., 438. and Vail, W. E., [aliphatic] acid synthesis process, (P.), B., 325.

and Waddell, J., antirachitic substances, (P.), B., 88.

and Wagner, F. C., synthetic resins, (P.), B., 700.

and Walker, J. F., organic acids, (P.),

B., 218. and Wells, C. F., seal for stirring devices

in chemical apparatus, (P.), B., 632. and Werntz, J. H., plastic composition,

and Werntz, J. H., plastic comp.

(P.), B., 591.
Wieland, H. J., and Stallmann, O.,
o-nitroanisole, (P.), B., 420.
and Williams, O. S., inhibitor for rubber
vulcanisation, (P.), B., 266.

Williams, I., and Croco, C. W., thiuram monosulphides, (P.), B., 878. and Wirth, W. V., 4-acetyl-5-tert.-butyl-m-xylene, (P.), B., 880.

and Woodbridge, R. G., treatment of smokeless powder, (P.), B., 296. [Flashless] propellent powder, (P.), B.,

and Woodhouse, J. C., methacrylic esters of polyhydric alcohols, (P.), B., 417. Hydrogenation of oxygenated organic compounds, (P.), B., 525. Catalyst and catalytic process [for producing fatty acids], (P.), B., 1172. and Wortz, C. G., adsorbent carbon, (P.),

and Wuertz, A. J., anthraquinone derivatives [and dyes], (P.), B., 880.

Dyes and intermediates of the dibenzanthrone series, (P.), B., 1028. Vat dyes of the dibenzanthrone series, (P.), B., 1029. Violanthrone [dibenzanthrone] derivatives [vat dyes], (P.), B., 1029.

Wuertz, A. J., and Lycan, W. H., violanthrone [dibenzanthrone] derivatives

[vat dyes], (P.), B., 1028.

Wuertz, A. J., and Whelen, M. S., benzanthronethiazoles, (P.), B., 121.
Benzanthroneselenazoles, (P.), B., 121. Chlorobenzoylaminoanthraquinones, (P.), B., 218. Chloro-substituted dibenzoylaminoanthrimide compounds, (P.), B., 218. Derivatives of anthraquinone, (P.), B., 529. [Vat] dyes of the anthraquinoneacridone series, (P.), B., 1029. isoDibenzanthroneazoles [vat dyes], (P.), B., 1030. Dibenzanthroneazoles [vat dyes], (P.), B.,

and Zwilgmeyer, F., colouring of [textile] materials [with ice colours], (P.), B.,

Du Pont Rayon Co. See Chayassieu, H., Greenewalt, C. H., Harrison, P. E., Haskins, J. F., Kline, E., Pierrat, P., Sigler, G., and Theumann, M. J.

Dupont Viscoloid Co., and Brossman, P. D., lead pigments, (P.), B., 947.

Dupont Viscoloid Co. See also Alfthan, J., Bren, B. C., Crane, P. W., Harford, E. F., Haught, J. W., Kuettel, G. M., Marks, B. M., Odell, A. F., Strain, D. E., and Wilder, G. H.

Dupouy, G. See Jacquinot, P. Duraloy Co. See Carpenter, O. K.

Duran-Reynals, F., [cell] diffusion factors,

A., III, 87.

Durand, J., determination of perchlorates; application to biological substances, A., IĨ, 334.

Durand, J. F., cryoscopy in camphor, A., I, 151.

and Lautié, R., parachor expression independent of surface tension, A., I,

and Naves, Y. R., apparatus for heating and opening scaled tubes, A., I, 201. and Vièles, P., adipocere of a fowl, A.,

Ill, 295.

Durand, M. A., coefficient of thermal expansion of magnesium oxide, A., I, $40\bar{5}.$

Durand, R. See Diacono, H.

Durand-Gasselin, A. See Gibert, P.

Durand & Huguenin Akt.-Ges., resists in dyeing with ester salts of leuco-vat dyes, (P.), B., 31. Mordant dyes [of the azine series], (P.), B., 122. Pro-duction of coloured resists under aniline-black by means of ester salts of leuco-vat dyes, (P.), B., 1041. Coloured [vat-dye] resists, (P.), B., 1196.

See also Tschumi, H., and Zeh, L.

Durau, F., Krächter, H., and Koopmann, K., ideal adsorption isotherm, A., I,

and Müller, R., adsorption of gases by lead chloride spheres, A., I, 299.

and Reckers, J., adsorption of gases at low pressures by lead chloride, A., I,

and Tschoepe, G., adsorption of benzene, hexane, and acetone by lead chloride of known surface, A., I, 25.

Durbin, H. R., and Internat. Cement Corp., Portland cement, (P.), B., 1210.

Durdin, A. C. See Morgan, P. F. Durfee, T., Arnott, W. S., and Nelson, P. R., cream in paper milk containers, B., 490.

Durgin, C. B., and Swann Res., Inc., cleaner for tin, zinc, and aluminium, (P.), B.,

Durham, H. E., detection and determination of heavy metals in cider, B., 968. Determination of volatile acids in cider and other beverages, B., 1117.

Durham, L. P., and Laschinger, J. E., flotation of a Transvaal refractory gold

ore, B., 450.

Du Rietz, C., ionic-concentration relationships in solid sulphite-cellulose. III.,

Durium Products Corporation, phonograph records and methods of making mouldable material for production thereof and for other purposes, (P.), B., 812.

Durland, J. R., and Adkins, H., hydrogenation of phenanthrene, A., II, 93.

Duron, P. See Chambon, M., and Meersseman, F.

Durrell, L. W. See Bodine, E. W.

Durst, G., impregnation of sailcloth with tar, B., 538. Analysis of proofed sail-cloth, B., 898. Determination of fireproof properties of textile fabrics, B., Durtnall, H. J. A., Goodeve, C. F., and Lythgoe, R. J., quantitative analysis of the photochemical bleaching of visual purple solutions in monochromatic light, A., I, 145.

Duschinski, F., predissociation of polyatomic molecules, A., I, 116. "Concentration extinction" of fluorescence of dye solutions, A., I, 168.

Dushková, V., effect of exhausted frog muscle on growth of wheat seedlings, A., III, 160.

Dushman, S., search for high-efficiency light sources, A., I, 427.

and Seitz, F., quantum theory of valency, A., I, 223.

Dussek, A. E. H., composite surfacing materials, (P.), B., 916.

Dusseldorf Chemical Co. See Bolen, W. P. Dustman, R. B. See Brown, W. C., and Duncan, I.J.

Dutcher, R. A. See Guerrant, N. B.,

and Shaw, A. O.

Duthie, D. W., tropical soils. IV. Organic transformations in soils, composts, and peat, B., 593.

Dutilloy, J., $p_{\rm H}$ and $r_{\rm H}$ [in beet-sugar manufacture], B., 605. Application of hyposulphites in the sugar industry;

oxidation-reduction potential, B., 1393.

Dutilloy, R., adaptation of "sugar and molasses" to requirements of economy, "The two molasses," B., B., 75. 961.

Dutky, S. R. See Knaysi, G.

Du Toit, J. L., keeping properties and refining quality of South African raw sugars, 1935—6; [acarids in raw sugars], B., 1393.

Du Toit, P. J., and Malan, A. I., phosphorus and calcium deficiency diseases as two ætiologically distinct entities, A., III, 343.

Dutt, A. T. See Chopra, R. N.

Dutt, B. K., and Thakurta, A. G., "after-ripening" of seed, B., 957. See also Thakurta, A. G.

Dutt, N. K. See Rây, P. R. Dutt, S. See Agarwal, R. R., Gupta, M. P., and Misra, R. N.

Dutta, A. K., absorption spectra of alkali halides and their constituents in solution, A., I, 391.

Dutta, M. C., Frincisco, J. S., Kamal, S., Mackijani, J. K., and Soundararajan, R., effect of feeding vegetable oils on fat content of milk and quality of butter, B., 1260.

Dutton, C. E., cristobalite at Crater Lake, Oregon, A., I, 482.

Dutton, J. C. See Imperial Chem. In-

Dutton, W. C., and Farish, L. R., comparison of high-calcium and dolomitic limes in Bordeaux mixture, zinc-lime, and iron-lime [sprays] on cherry and

peach, B., 601.

Dutzmann, W., treatment of difficultly volati[li]sable liquid fuels for internalcombustion engines, (P.), B., 412.

Duuren, A. J. van. See Rowaan, P. A. Duval, C. See Hibbert, (Mlle.) D.

Duval, R., action of an electric current on hæmoglobin in presence of electrolytes, A., III, 194.

and Le Goff, J. M., occurrence of small amounts of cobalt in human urine, A., III, 202.

Duvall, H. M. See Mosettig, E. Du Vall, R. B. See Dow Chemical Co.

Du Vigneaud, V., insulin, A., III, 492. and Behrens, O. K., protecting the iminazole ring of histidine during certain reactions and its application to the preparation of l-amino-N-methyl-

histidine, A., II, 212.

Dyer, H. M., and Jones, C. B., physiological behaviour of acetyl derivatives of optical isomerides of homocystine; biological proof of their stereo-structure, A., III, 309.

Loring, H. S., and Miller, G. L., synthesis of a-glutamylcysteinylglycine (isoglutathione), A., II, 235.

and Miller, G. L., synthesis of glutathione, A., II, 53.

Sifferd, R. H., and Irving, G. W., jun., utilisation of l-carnosine by animals on a histidine-deficient diet, A., III, 129. Sifferd, R. H., and Miller, G. L., absence

of thiolhistidine from insulin, A., III, 75. See also Behrens, O. K., Jones, C. B., Miller, G. L., and Patterson, W. I.

Duwez, P. E., influence of temperature on plasticity of crystals, A., I, 173. See also Homes, G. A.

Dux, J. M., softening of bleached and dyed ruscus, (P.), B., 31.

Dvinjaninova, I. See Bauman, M., and Rusch, V. A.

Dvolaitzka, F. See Roger, M.

Dvornikoff, M. N., and Monsanto Chem. Co., chlorination of phthalic anhydride, (P.), B., 120. Pyramidone, (P.), B., 1270.

Dvorzsák, H., Valentenyi, A., and Kachelmann, K., amalgamators [for recovery of precious metals from ores], (P.), B., 251. Dwelshauvers, F., relationship between

blood-calcium level and effect of intravenous injections of adrenaline in the dog, A., III, 360.

Dwight, C. H., and Kersten, H., mask for printing Laue photographs, A., I, 330. See also Kersten, H.

Dwight & Lloyd Metallurgical Co. Sec Lloyd, R. L.

Dworaczek, E., and Barrenscheen, H. K., chemical changes in smooth muscle. Chemistry of smooth muscle, A., III, 471.

Dworzak, R., and Friedrich-Liebenberg, A., determination of total alkalis and microgravimetric determination of sodium as sodium magnesium uranyl acetate; (micro-analysis of mineral waters), A., I,

Dwyer, C. M. See Sperti, G. S.

Dwyer, F. P., spot test for cadmium, A., I, 262. Purification of diazoaminocompounds, A., II, 144.

and Murphy, R. K., aniline thiocyanate; a sensitive reagent for copper, A., I,

Dwyer, F. W., and Gilbert, F. B., gas-

testing device, (P.), B., 742.

D'Yarmett, E. C., apparatus for cracking hydrocarbon oils, (P.), B., 323. Separating lighter from heavier components of liquids by distillation, (P.), B., 511. Heat treatment of liquids, (P.), B., 1148.

Dyckerhoff, H., Behm, W. von, Goossens, N., and Miehler, H., blood coagulation.

II., A., III, 5.

Dye, M. See Hawks, J. E.

Dye, W. B. See Bisson, C. S.

Dyer, B., origin of Gutzeit test, A., I, 45. Dyer, E., and Ballard, E., dipeptides of β-amino-acids, A., II, 448.
Dyer, H. M. See Du Vigneaud, V., and

Patterson, W. I.

Dyer, J. P., and Nichols Copper Co., electrode [copper starting sheet], (P.), B., 803. Dyer, J. W. W. See Rubber Producers Res. Assoc.

Dyke, H. B. van, physiology and biochemistry of the reproductive organs, A., III, 464.

Dyke, R. H. van. See Eastman Kodak Co. Dyke, S. C., agranulocytosis and amido-pyrine, A., III, 58. Dykstra, H. B. See Du Pont de Nemours

& Co., E. I.

Dykstra, K. See Van Os, D.
Dykstra, K. G. See Fulmer, E. I.
Dymek, W. See Dziewoński, K.

Dyment, S. A., some eighteenth century ideas concerning aqueous vapour and evaporation, A., I, 636.

Dymond, E. G., anomalous scattering of protons in light elements, A., I, 106.

Dymond, G. C., refrigeration in sugar laboratories (for preservation of samples of mixed juice), B., 173. Report on clarification, B., 173.

Dynamit Akt.-Ges. vorm. A. Nobel & Co. See Baermann, M., jun.

Dyniewicz, H. A. See Fantus, B. Dyniewicz, J. M. See Fantus, B. Dyson, C. M., Raman effect and the con-

cept of odour, A., III, 93.

Dyson, G. M., Renshaw, A., and Parke, Davis & Co., organic derivatives of antimony, (P.), B., 393.
See also Argyle, C. S., Beckett, T., and

Connolly, J. M.

Dyson, P., and Hammick, D. L., mechanism of decarboxylation. I. Decomposition of quinaldinic and isoquinaldinic acids in the presence of compounds containing carbonyl groups, A., II, 518.

Dželepov, B. S., influence of the charge of a nucleus on the form of its β -spectrum, A., I, 276. X-Ray scattering in liquids, A., I, 399.

See also Alichanian, A. I.

Dziewoński, K., and Dymek, W., synthesis of 2:4-diarylaminoquinoline derivatives, A., II, 166.

and Moszew, J., reactions of 2:4-dimethylacetophenone with compounds of the thiocarbanilide type, A., II, 210. and Sternbach, L., pyrene. I., A., II, 248. Pyrene series, A., II, 285.

Sternbach, L., and Strauchen, A., reactions of β -naphthylamine with thiocarbamide, A., II, 214.

Dzirkal, V. See Longinov, V.
Dzsinich, A., and Falus, P., physiology
and pathology of calcium metabolism
in man, A., III, 20.

and Pély, M., change of carbohydrate metabolism in allergic states and under histamine reactions, A., III, 11.

E.C.D., Ltd. See Evans, D.J.

Eader, W. H., Bonfils, F. W., and De Bernadi, A., jun., artists' material, (P.), B., 1276.

Eagle, H., and Harris, T. N., coagulation of blood by proteolytic enzymes (trypsin, papain), A., III, 85. Blood coagulation. V. Coagulation by proteolytic enzymes, A., III, 196.

Smith, D. E., and Vickers, P., effect of combination with diazo-compounds on the immunological reactivity of antibodies, A., III, 338.

Eagle, S., and Warner, J. C., kinetic medium effects in reaction between bromoacetate and thiosulphate ions, A., I., 35.

Eagle-Picher Lead Co., modern trends in zine and lead pigments, B., 809.

See also Harner, H. R.

Eagles, G. H., Evans, P. R., Fisher, A. G. T., and Keith, J. D., virus in the ætiology of rheumatic diseases, A., III,

Earl, J. C., decomposition of aniline nitrite, A., II, 408.

and Doherty, J. B., chemical examination of Sarcostemma australe, R.Br.,

the "caustic vine," A., III, 245. and Hazlewood, S. J., action of alkaline reagents on some nitroso-a-arylaminoketones and their oximes, A., II,

Easly, H. F., rapid cleaning of mercury, A., I, 202.

Easson, L. H., and Stedman, E., specificity of choline-esterase, A., III, 481.

Easter, G. J. See Carborundum Co. Eastes, J. W. See Bruson, H. A.

Easthampton Rubber Thread Co., rubber threads, (P.), B., 1093. Products from rubber threads, (P.), B., 1093.

Eastland, C. J., Evers, N., and West, T. F., rapid determination of triethanolamine,

B., 522.

Eastland, J. S. See Schmidt, E. G. Eastman, E. D., and McGavock, W. C., heat capacity and entropy of rhombic and monoclinic sulphur, A., I, 124.

Eastman Kodak Co., photographic elements having yellow screening dyes, (P.), B., 91. Colour photography, (P.), B., 91. Colour-forming developers and processes of colour development, (P.), B., 295. [Optical] glasses, (P.), B., 551. Dyes, (P.), B., 764. Carbocyanino dyes, (P.), B., 764. Removal of water from aqueous aliphatic acids, (P.), B., 877. Sensitising of photographic gelatino-silver halide emulsions, and manufacture of dyes therefor, (P.), B., 1276. Sensitising of photographic silver-salt emulsions, and manufacture of dyes therefor, (P.), B., 1276.

Babcock, G. S., and Beach, N. F., wrapping material, (P.), B., 1193. and Beach, N. F., stripping film, (P.), B.,

Bramer, II. von, and Ruggles, A. C., [benzo]quinone, (P.), B., 529. Branchen, L. E., and Clark, G. R.,

moisture proof paper, (P.), B., 431. and Brooker, L. G. S., photographic emulsions containing 7-alkylthio-iso-and -\psi-cyanines, (P.), B., 1409.

Brooker, L. G. S., and White, F. L., carbocyanine dyes, (P.), B., 1184.

and Capstaff, J. G., film for colour photo-

graphy, (P.), B., 90.
and Carver, E. K., curing [removal of solvent from] cellulose derivative sheeting, (P.), B., 430.

Clarke, G. J., and Clarke, H. T., refining of cellulose acetate, (P.), B., 1191.

Clarke, H. T., and Malm, C. J., cellulose

esters, (P.), B., 1323. Coleman, D. J., jun., and Smith, H. B., cellulose organic ester compositions containing the ethyl ether of ethylene glycol monoisocaproate, (P.), B., 1243.

and Conklin, F. R., moulding process [for cellulose acetate plastics], (P.), B.,

1373.

Eastman Kodak Co., Crabtree, J. I., and Vittum, P. W., fine-grain [photographic] developers, (P.), B., 1410.

Crouch, H. W., and Jewett, E. C., colouring of cellulosic solutions, (P.), B., 1192.

Dyke, R. H. van, Staud, C. J., and Gray, H. Le B., fibrous esterification of cellulose, (P.), B., 127.

Fallesen, G. E., and Staud, C. J., print-

out emulsion, (P.), B., 295. and Fisher, W. E., dehydration of pyridine and its homolognes, (P.), B., 1178.

and Gordon, J.J., operation for azeotropio distillation, (P.), B., 741. Removal of water from aqueous aliphatic acids, (P.), B., 1021. and Hull, D. C., cellulose organic ester

compositions containing a propionyl ester of glycerol, (P.), B., 157. and Kallock, W. F., wrapping material,

(P.), B., 895.

Kenyon, W. O., and Waugh, G. P. fibrous esters of cellulose, (P.), B.,

and McNally, J. G., laminated glass, (P.), B., 38.

McNally, J. G., and Beach, N. F., [transparent, moistureproof] wrapping material, (P.), B., 1324.

McNally, J. G., and Sweet, S. S., [adhesive for] laminated glass, (P.), B.,

and Malm, C. J., high-viscosity mixed esters of cellulose, (P.), B., 28. Stabilisation of cellulose esters, (P.), B., 535. Impregnation of cotton materials, (P.), B., 1197.

Malm, C.J., and Coleman, J.D., alkoxyfatty acid esters of cellulose, (P.), B.,

Malm, C. J., and Fisher, W. E., aliphatic acid anhydrides, (P.), B., 21.

Malm, C. J., and Fletcher, C. L., fibrous esterification of cellulose, (P.), B., 895. Hydrolysis of cellulose esters containing higher fatty acid groups, (P.), B., 1191.

Malm, C. J., and Fordyce, C. R., nonalkali-metal salts of dicarboxylio acid esters of cellulose, (P.), B., 535. Hydroxyalkyl esters of dicarboxylic acid esters of cellulose and products resulting therefrom, (P.), B., 1037.

Malm, C.J., and Nadeau, G.F., sulphonic esters of cellulose derivatives, (P.), B., 1191.

Mannes, L. D., and Godowsky, L., jun., colour-forming developer, (P.), B., 623. Differential treatment of multi-layer [photographic] films, (P.), B., 1277.

and Murray, T. F., jun., light-filtering overcoating containing diphenylene oxide, (P.), B., 947.

and Othmer, D. F., concentration of acetic acid, (P.), B., 213, 1021. and Reid, M. J., [process for] refining [a

photographic] plasticiser, (P.), B., 1277. Refining of crude triphenyl phosphate, (P.), B., 1314. and Seymour, M. W., light-sensitive

photographic element, (P.), B., 845. and Sheppard, S. E., infusible moulded

product, (P.), B., 700. Sheppard, S. E., and Hudson, J. H., matt surfaces [on photographic supports], (P.), B., 845.

and Slack, A. D., non-halation photographic film, (P.), B., 500.

Eastman Kodak Co., and Smith, H. B., cellulose ester composition containing an a-substituted phenylethyl alcohol, (P.), B., 700. Cellulose organic ester compositions containing trietbyleno glycol di-a-hydroxyisobutyrate, (P.), B., 1243.

and Wells, T. B., treatment of cellulose derivative sheets, (P.), B., 430.

Yackel, E. C., and Kenyon, W. O., fibrous esterification of cellulose em-ploying homogenisers of the benzene series, (P.), B., 1191.

See also Carbide & Carbon Chem. Corp. Eastwood, A.H. See Key, A., and Wood, J. W.

Eastwood, F. A. See Young, J. W. Eastwood, L. W., Bousu, A. E., and Eddy, C. T., copper and copper-manganese grey cast iron, B., 559.

Eastwood, T., Northern England, A., I, 206. Eaton, A. G., Cordill, S. C., and Gouaux, J. L., specific dynamic action of glycine intravenously administered to nephrectomised dogs, A., III, 208.

Eaton, F. M., automatically-operated sandculture equipment, A., III, 47. Salinity of irrigation water and injury to crop

plants, B., 479.

Eaton, G. L. See Weir, H. M. Eaton, J. C. See Paton, J. P. J. Eaton, M. D., purification of tetanus toxin, A., III, 86. Purification and concentration of diphtheria toxin. I. Evaluation of previous methods: new procedure. II. Nature of the toxin, A., III, 226.

See also Urban, F. Eaton, M. W. See Eaton, P.

Eaton, P., and Eaton, M. W., temperature and growth of [human] hair, A., III, 474.

Eatough, H. See Du Pont de Nemours & Co., E. I.

Ebbecke, U. [with Haubrich, R.], effect of compression on viscosity of various organic liquids, A., III, 473. See also Deuticke, H. J.

Ebbinghaus, E. See Meissner, K. W. Ebbrecht, E., modern filtration with bag filters in the chemical and allied industries, B., 736.

Ebe, T. See Minatoya, S.

Ebeling, IV., effect of oil spray on California red scale at various stages of development, B., 603.

Ebeneder, F. See Kailan, A. Eberhardt, E. G. See Bossart, O. A. Eberhardt, J. E. See Hershey, R. L.

Eberle, W. A. See Standard Oil Development Co.

Eberlein, L., condensed milk, its manufacture and importance, B., 280.

Eberly, F. A., and Dains, F. B., formation and reactions of substituted thiazolidones. IV., A., II, 123.

Ebers, E. S., and Nielsen, H. H., infra-red spectrum of formaldehyde, A., I, 112, 598.

Ebert, H., measurement of [air] humidity at temperatures below 0°, B., 1413.

and Kussmann, A., change of saturation magnetisation with uniform pressure,

A., I, 402. Ebert, R. See Lieser, T. Eberz, W. F., Welge, H. J., Yost, D. M., and Lncas, H. J., hydration of unsaturated compounds. IV. Rate of hydration of isobutene in the presence of silver ion; nature of the isobutenesilver complex, A., I, 135.

Ebihara, T. See Fujita, A. Ebiko, K., refractive indices of expressed juice of wheat seedlings, B., 1251.

Ebina, R. See Kuroda, K.

Ebner, A. J., generation and industrial uses of gas from wood, B., 405.
Rice, O. R., and Freyn Eng. Co., tower

gas washer, (P.), B., 996. Ebster, H., effect of a irradiation on extension growth [in seedlings], A., III,

Echenique, L., effect of high calcium content of Cynara cardunculus, L., and Silybum Marianum, L., on milk, A., III, 133.

Echevin, R., influence of calcium carbonate on growth of radish, B., 823.

and Brunel, A., nitrogen metabolism during germination of the lupin (Lupinus albus, L.), A., III, 284. Ureides and free urea, degradation products of the purines of Soja hispida, Mnch., A., III, 408.

and Ulrich, R., intravacuolar inclusions in the fruit of the ivy (Hedera helix, L.),

A., III, 446. Seo also Brunei, A.

Echols, L. S., and Pease, R. N., inhibition of thermal decomposition of n-butane by nitric oxide, A., I, 314.

Eck, J. C., and Thomas, B. H., chemical activation of sterols. III. Activation of cholesterol. IV. Activation of cholesterol and cholesterileno by various reagents, A., III, 364.

Thomas, B. H., and Yoder, L., chemical activation of sterols. II. Activation of cholesterol and its derivatives, A.,

III, 156.

Eckardt, A., production of radioactive elements by bombardment of lithium and magnesium with a-rays from thorium-C', A., I, 389.

Eckardt, B. See Grimmer, W., and Tropp, C.

Eckardt, M. See Oberdisse, K. Eckardt, W. Sec Brintzinger, H.

Eckart, C., correction of continuous spectra for the finite resolution of the spectrometer, A., I, 337. See also Weinberg, A.

Eckarth, H., Stark effect with magnesium lines, A., I, 589.

Eckbo, N., forest products, B., 1209.

Ecker, H. See Scheibe, G. Eckert, C. R. See Barrett Co.

Eckert, E., reflexion of heat rays from surfaces, B., 299.

See also Schmidt, E.

Eckford, W. See Goodlass Wall & Lead Industries.

Eckhardt, K. See Wartenberg, H. von. Eckler, C. R., and Chen, K. K., action of synthetic vitamin-B₁, A., III, 439.

Eckles, L. E. See McKhann, C. F. Eckman, M. See Barach, A. L.

Eckstein, A., mechanism of irreversible diffusion of dyes through the frog's skin, A., III, 23.

Eckstein, G. R., and Visco Meter Corp., viscosity-indicating device, (P.), B., 307.

See also Hector, L. G.

Eckstein, H.C. See Wile, U.J.Eckstein, O., magnesium-containing fertilisers, B., 956.

Eckstrom, H. C. See Pearce, J. N. Ecrémeuses Mélotte Société Anonyme, centrifugal [cream-type] separators, (P.), B., 304.

Eddington, (Sir) A., theory of scattering of protons by protons, A., I, 595.

Eddins, A. H., bacterial wilt of potatoes, tomatoes, and egg-plant controlled with sulphur and limestone, B., 1105. and Scoville, W. H., sampling soil for $p_{\rm H}$ determinations, B., 594.

Eddy, C. O., spray programme for fruit insect control, 1935, B., 603. Miscible oil emulsifiers and spreaders, B., 711.

Eddy, C. T. See Eastwood, L. W. Eddy, C. W., and De Eds, F., photo-electric

determination of phosphorus, A., I, 148. Eddy, H. C., and Petroleum Rectifying Co. of California, treatment of petroleum [emulsions], (P.), B., 19. Electric Electric treater for [oil] emulsions, (P.), B., 19. Electrically treating [oil] emulsions, Electrically treating [oil] emulsions, (P.), B., 19. Breaking [oil] emulsions,

(P.), B., 19.
Eddy, N. B., [pharmacology of] phenanthrene derivatives. VII. Comparison of analogous phenanthrene and di-

benzfuran derivatives, A., III, 23. Eddy, W. H. See Kohman, E. F.

Edel, H., bottle-washing alkalis, B., 546. Calculation in standardising cream and milk, B., 833.

Edelberg, W. See Maillard, A.

Edeleanu Ges.m.b.H., treatment of hydrocarbons of low b.p., (P.), B., 754.

and Grote. W., resolution of mixtures of liquid hydrocarbons into the components thereof by means of selective solvents, (P.), B., 412.

Terres, E., Saegebarth, E., and Moos, J., refining of hydrocarbon oils, (P.), B., 754.

See also Cottrell, O. P.

Edelman, P. E., and Mack, R. T., electrical condenser, (P.), B., 1363. Edelson, L. R. See Slavinski, M. P.

Edelstein, S. M., variations in removal of pectic substances from cotton yarn in the mercerisation process as a source of dye-affinity variation in mercerised yarn, B., 1327. [Cotton] merceris-ation. I. Effect of caustic soda concentration. II. Effect of tension, B., 1327.

and Cady, W. H., bibliography of mercerisation, B., 1040.

See also Ransom, H.

Eden, A. See Woodman, H. E.

Eden, H. W., and Triple-A-Specialty Co., thermohydrometer, (P.), B., 635. Eden, T., manuring of tea, B., 956.

 Eder, R. See Klemenc, A.
 Edgar, C. E., and Macrae, T. F., water-soluble B-vitamins. VIII. Essential dietary factors for the rat present in autoclaved yeast extracts in addition to lactoflavin. IX. Properties of dietary factor in fuller's earth filtrate from autoclaved yeast extracts, A., III, 281.

Macrae, T. F., and Vivanco, F., water-soluble B-vitamins. VII. Growthpromoting properties of lactoflavin, A., III, 281.

Edgar, L. C., open-hearth furnace, (P.), B., 629.

Edgar, R., deterioration of weighted silk under the conditions of acidity, alkalinity, and salinity to which fabrics are subjected in service and maintenance, B., 1327. See also Barr, F.

Edge, S. R. H., and McKenzie, H. M., discoloration of wood pulp by light and heat. B., 426.

Edgerton, H. E., Hauser, E. A., and Tucker, W. B., drop formation as revealed by the high-speed motion camera, A., I, 612.

See also Hauser, E. A. Edgeworth-Johnstone, R., nomographic chart for computation of fractionating columns for binary mixtures, B., 989.

Edgington, B. H. See Gerlaugh, P.Edin, H., Helleday, T., and Andersson, A., relation between surface area and form of hens' eggs; breaking strength of eggs and its relation to degree of mineralisation of shells, as measured by weight of ash per unit surface, B., 834.

Edisbury, J. R., Lovern, J. A., and Morton, R. A., distribution of vitamin-A in the tissues of the eels Anguilla vulgaris and A. aucklandi, Rich., A., III,

187.

Morton, R. A., and Simpkins, G. W., possible vitamin-A2, A., III, 404.

See also Lovern, J. A., and Pritchard, H. Edlbacher, S., Jucker, P., and Baur, H., effect of amino-acids on action of histamine on the intestine, A., III,

and Segesser, A. von, degradation of histidine and other glyoxaline derivatives by ascorbic acid, A., II, 307. Catalytic fission of the glyoxaline ring, A., II, 433. Green derivative of hæmoglobin, A., III, 370.

and Zeller, A. enzymic degradation of histamine. I., A., III, 428.

and Zeller, A. [with Becker, M.], arginasc, A., III, 97.

Edlén, B., Mg I-like spectra of elements Ti to Co, Ti xi, V xii, Cr xiii, Mn xiv, Fe xv, and Co xvr, A., I, 53. S I-like spectra of elements titanium to iron, Ti vii, V viii, Cr ix, Mn x, and Fe xi, A., I, 53. Cl I-like spectra; Cl I. A II, K III, Ca IV, Ti VI, V VII, Cr VIII, Mn IX, Fe x, and Co x1, A., I, 157.

Edlund, K. R. See Shell Development Co. Edmonds, R. G. See Adams, F. W.

Edmunds, C. W., determination of serum-calcium, A., III, 196.

Moyer, C. A., and Shaw, J. R., standard digitalis powder of the U.S.P., A., III, 267.

Edsall, J. T., Raman spectra of amines and methylated ammonium ions, A., I, 62. Raman spectra of amino-acids and related compounds. II. Guanidine and urea derivatives. III. Ionisation and methylation of the amino-group. IV. Ionisation of di- and tri-carboxylic acids. A., I, 168, 282, 444.

Edson, N. L., and Leloir, L. F., keto-genesis-antiketogenesis. V. Metabolism genesis-antiketogenesis.

of ketones, A., III, 62.

Edström, O. See Hultgren, A. Edwardes, V. P., effect of wood quality on sulphite pulp, B., 768.

Edwards, A. See Neill & Co. (Sheffield), Ltd., J.

Edwards, A. B., iron ores of the Middleback Ranges, S. Australia, A., I, 334.

Edwards, C. A., gases in metals. I. and II., B., 1356.

Edwards, D. F. See Standard Oil Development Co.

Edwards, D. V., Smith, E. K., and Electrons, Inc., gaseous-discharge tube, (P.), B., 694.

Edwards, D. W., and Goff, R. A., factors affecting the chemical composition of pasture grasses, B., 184.

Edwards, F. W., and Nanji, H. R., phosphatase test [for milk], B., 489.

Nanji, H. R., and Hassan, M. K., determination of benzoic acid, A., II, 268. Detection and determination of phydroxybenzoic acid and its derivatives, with special reference to their distinction from salicylic and benzoic acids, A., II, 268.

Nanji, H. R., and Parkes, E. B., determination of bromides in presence of

other halides, A., I, 44.

Edwards, G. E., equilibrium and kinetic studies on reactions of the Menschutkin type in dilute solution. I. Suggested explanation of the solvent effect, A., I, 570.

Edwards, G. W., and Soccart, F., mixers, emulsifiers, etc., (P.), B., 511.

Edwards, H. T., lactic acid in rest and work at high altitudes, A., III, 165. See also Dill, D. B., Johnson, R. E., and Newman, E. V.

Edwards, H. W., and Petersen, R. P., reflectivity of evaporated silver films, A., I, 19. Optical changes in freshlyevaporated aluminium-magnesium films, A., Î, 503.

Edwards, J., Jones, G. D. O., Potter, G. J. C., and Johnston, H. W., groundwood studies. III. Process variables, using a miniature pulp grinder, B., 424. Investigation of process variables, using a miniature pulp grinder [for production of mechanical pulp], B., 1035.

Edwards, Joseph, effect of breed, size of cow, yield of milk, and stage of lactation

on efficiency of milk production, B., 184. Edwards, J. D., reflecting surfaces of aluminium, B., 576. Anode for electrolytic condensers, (P.), B., 1074.

Edwards, J. K., cytological studies of toxicity in meristem cells of roots of Zea mais. I. Effects of neutral salts, A., III, 407.

Edwards, O. F., and Rettger, L. F., relation of certain respiratory enzymes to the maximum growth temperatures of bacteria, A., III, 358.

Edwards, R. L., single-dose technique for assay of vitamin-D, A., III, 79.

Edwards, R. S., free water and vegetabletanned sole leather. II. Further studies and theoretical considerations, B., 1094.

Edwards, R. T. Seo West, W.

Edwards, S. J. See Nichols, A. A.
Edwards, T. G. See Iredale, T.
Edwards, T. O., jun. See Associated Oil Co.
Edwards, W. L., designing soft copper
gaskets for high-pressure equipment, B.,

Eeckhout, J., polarographic reduction potential of dinitro-compounds, A., I, 365.

See also Gillis, J.

Eegriwe, E., colour test for magnesium, A., I, 149. Detection of aluminium with eriochromeyanin R, A., I, 263.

Eekelen, M. van, amount of ascorbic acid in blood and urine; daily human requirements for ascorbic acid, A., III, 78.

Emmerie, A., and Wolff, L. K., diagnosis of hypovitaminosis-A and -C by determination of the concentration vitamin-A and -C in the blood, A., III, 231.

Efimova, N. I., influence of substances artificially introduced into tobacco leaves on development of "Riaboukha" disease, B., 604.

Etkemann, G. See Anselmino, K. J. Efremov, N. N., Federmeer, D. L., and Prinkmann, K. J., acenaphthene compounds, A., I, 307.

Vinogradova, A. D., and Tichomirova, A. M., binary systems with palmitic acid, A., I, 517.

See also Tichomirova, A. M., and Vinogradova, A. D.

Efremova, O. S. See Kozakevitsch, S. S. Efremova, T. N. See Kazarnovski, S. N. Eftring, E., conductometric apparatus for fast reactions, A., I, 153.

Egami, F. See Aubel, E. Egami, Y., individuality, from aspect of hamolysis, of distribution of water between plasma and erythrocytes, A., III, 114. Individual differences in the degree of hamolysis and the factors which determine them, A., III, 195.

Egan, C. J., and Kemp, J. D., ethylene; heat capacity from 15° abs. to b.p.; heats of fusion and vaporisation; vapour pressure of the liquid; entropy from thermal measurements compared with entropy from spectroscopic data, A., I, 452.

See also Giauque, W. F.

Egdell, J. W., faults in cheese, B., 1400. Egeberg, B., and Promisel, N. E., evaluating the brightness of electrodeposits, B., 454. Testing and stripping of electrodeposits. I. Silver. II. Gold. III. Nickel, cobalt, and nickel-cobalt, B., 686, 923.

Egeberg, F. P., flotation and its possibilities in the Norwegian mining industry, B.,

Egge, W. S. See Bonney, R. D., and Congoleum-Nairn, Inc.

Egger, T., dyeing of mixtures of wool and viscose-rayon staple fibre, B., 1195. Eggers, G., Woltman flow meter [for liquids], B., 1143.
Eggers, H., main types of ternary phaso

diagrams with iron, carbon, and any third element as components, A., I, 243.

See also Wever, F.

Eggers, H. R., temperature measurement with resistances and T-coil apparatus, B., 360.

Eggert, J., present position of theory of the latent [photographic] image, A., I, 39. New Agfacolor process, B., 845.

and Heymer, G., present position of colour photography, B., 1409.

and Küster, A., so-called photometric constants, B., 90.

Eggleston, F. F. H., and Martin, L. H., angular distribution of photo-electrons from the K shell, A., I, 591. See also Martin, L. H.

Eggleston, G. C. See Keck, W. E. Eggleston, G. K., non-ferrous foundry sand control, B., 929. Non-ferrous sand control, B., 1217.

Eggleton, M. G., Eggleton, P., and Hamilton, A. M., distribution of chloride in frog's skeletal muscle immersed in saline solution, A., III, 454.

Eggleton, P. See Eggleton, M. G.

Egle, K., lighting of plants and their leaf pigments, A., III, 501. Egli, A., thermal quantity meter, B., 737.

Eglington, R. See Chilson, W. H. Egloff, G., motor fuel from catalytic treatment of cracked gases, B., 109. 205. Polymer gasoline, B., Modern hydrocarbon synthesis, B., 407.

Egloff, G., Nelson, E. F., and Morrell, J. C., motor fuel from oil cracking; production by the catalytic water-gas reaction, B., 868.

and Parrish, C. I., reactions of olefines in presence of metals, B., 414.

Thomas, C. L., and Linn, C. B., pyrolysis of propane and the butanes, A., II, 1. See also Universal Oil Products Co.

Egorov. See Lotorev. Egorov, V. E., attempt to intensify cultivation of virgin loess-like podsol by chemisation, B., 596.

Egorov, V. S., system KCl-Ca(ClO₃)₂ at 25° in aqueous solution, A., I, 82.

See also Bergman, A. G., and Kurnakov, N. S.

Egorova, L. V. See Tzuipkina, M. N. Egorova, V. I., catalytic hydrogenation of alicyclic ketazines; hydrogenation of cyclohexanone ketazine and its methyl derivatives, A., II, 103. Egupov, T. See Bag, A.

Egy, L., Cobb sizing tester [for paper], B.,

Egyesült Izzólámpa és Villamossági R./T., metallic tungsten powder, particularly suited for manufacture of thick filamentary incandescence bodies, (P.), B., 251.

Egyptian Lacquer Manufacturing Co. See Howlett, G. W., and Thuesen, D. G.

Ehmann, E. A. See Hieber, W.

Ehmert, A., absorption curve of the hard components of cosmic ultra-radiation, A., Î, 545.

Ehrenberg, P., substitution of protein by industrially prepared nitrogen compounds in feeding-stuffs for ruminants, B., 1265. Ehrenfest, P., jun. See Auger, P.

Ehret, L. See Schmid, G. Ehret, W. F. See Straten, F. W.

Ehrhardt, U., triodometer; apparatus for electrometric volumetric analysis, A., I., 49.

Ehrhart, G. See Bockmühl, M.

Ehrhorn, H. J., Weibke, F., and Biltz, W., affinity. LXXIII. Combining power of rubidium and gold, A., I, 371. See also Biltz, W.

Ehrismann, C., media containing ascorbic acid for anaërobic bacilli, A., III, 434.

Ehrke, L. F. See Slack, C. M. Ehrlich, C., control of raw and market

milk, B., 83. Grading of milk, B., 610. Ehrlich, F., pectolase, A., III, 430. Ehrlich, H. See Fischer, R. Ehrlich, P. See Biltz, W., and Davis, T. L.

Eich, E. See Chrétien, A.

Eichbaum,

ichbaum, F, and Kindermann, V, antigenic function of hormone preparations. I. Gonadotropic hormone of the anterior pituitary (prehormone), A., III, 185.

Eichelberger, L., and Hastings, A. B., exchange of salt and water between muscle and blood. III. Effect of dehydration, A., III, 176.

and Hastings, A. B. [with Tupikova, N.], exchange of salt and water between muscle and blood. II. Effect of respiratory alkalosis and acidosis induced by overbreathing and rebreathing, A., III, 176.

See also Hastings, A. B.

Eichenberg, G. See Mannesmannröhren-

Eichengrün, A., and Celanese Corp. of America, antifreeze compound, (P.), B.,

Eichenouer, H. See Lawrence, L.

Eichholtz, F., and Krauth, W., mutual action of cocaine and opium alkaloids, A., III, 267.

and Ungerecht, K., catalytic action of iron. IV. Activation of iron, A., III,

Eichinger, W. See Rapoport, S.

Eichler, H., qualitative analysis without use of hydrogen sulphide or sulphides, A., I, 97. Regularities of colour indicators, A., II, 238. Catalytic formation of resazurin, A., II, 309. Two new colour indicators from β-naphthylamine, A., II, 494. Specific detection of yperite [\beta\beta'-dichlorodiethyl sulphide, mustard gas] in air, B., 502.

Eichler, O., toxic action and excretion of iodide; principle of Le Chatelier, A.,

Eichner, C. See Lombard, V. Eicke, H. See Grassmann, P.

Eicke, S., and Wille, R., air flow, B., 628. Eickhoff, T. H. See Zorn, W. M.

Eiderman, M. M., and Veitzman, M. A., determination of perfumes in solutions, from the ψ -iodine value, B., 1133.

Eidus, J. T. See Balandin, A. A. Eigel, A. See Vanscheidt, A. Eiler, J. J., and Allen, Frank W., nucleotide nitrogen content of tissues of the dog and rabbit, A., III, 55.

Einecke, E., fifty years of the chemistry of fluorine, A., I, 636.
Einhorn, N. H. See Rowntree, L. G.

Einsel, I. H., Adams, W. L., and Myers, V. C., aluminium hydroxide in treatment of peptic ulcer, A., III, 15.

Eirich, F., tungsten oxide sol. II., A., I, 360. Colloid reactions and biological experiments with colloidal

tungstic oxide. III., A., I, 410. and Goldschmid, O., viscosity of suspensions and solutions. VIII. Inertia effects of suspended spheres, A., I,

Mark, H., and Huber, T., binding of solvents by immobilisation, A., I, 408.

Eirich, G. See under Eirich Gebr.

Eirich, J. See under Eirich Gebr. Eirich, L. See under Eirich Gebr.

Eirich Gebrüder, mixing and granulating pulverulent and plastic materials, (P.), B., 305.

Eisen & Stahlwerk W. Peyinghaus, lubrication of bearings, (P.), B., 309.

Eisenbrandt, L. L., precipitin reactions of helminth extracts, A., III, 115.

Eisenhauer, C. P., water softeners, (P.), B., 856.

Eisenkolb, F., comparative corrosion tests with soft steel sheets, B., 564.

Eisenlohr, F., and Alexy, K., quantitative emission spectrum analysis. I. Relative broadening of lines, A., I, 475. and Hill, L., rotatory dispersion of iso-

hydrobenzoin and dipole moments of isohydrobenzoin and benzoin, A., I, 397. Preparation of d- and l-iso-

hydrobenzoin, A., II, 288. and Metzner, A., dipole moments of the chalkones and β-ethoxychalkones, A., I, 284. cis-Cinnamic acids. II., A., I, 291.

Eisenlohr, K. H. See Reichel, L. Eisenman, A. J., Hald, P. M., and Peters, J. P., osmotic adjustments between cells and serum in the circulating blood of man, A., III, 166.

Eisenman, A. J., Mackenzie, L. B., and Peters, J. P., protein and water of serum and cells of human blood; measurement of red cell volume, A., III. 2.

See also Hald, P. M.

Eisenschind, O., perilla oil [in paint manufacture], B., 464.

Eisenwerke Weserhütte Akt.-Ges., and Lösche, H., continuous production of warm air and gases, (P.), B., 856. Apparatus for production of warm air and gases for drying wood and other structural materials, (P.), B., 856.

Eisler, M., and Gottdenker, F., decrease of toxicity of diphtheria toxin by lanoline and sterols; influence of cholesterol on its immunising power. I. and II., A.,

III, 414, 454. Eisner, A. See Fisher, C. H., and Wagner,

 $E. \dot{C}.$

Eitel, A. See Büssem, W. Eitel, W., position of the sillimanite-mullite problem, A., I, 225. Reactions in the solid state in the silicate industry, B., 136. Comparison of properties of silicate glasses and glass-clear synthetic materials, B., 943.

Eitigzon, I. I. See Cholevo, N. A. Ekambaram, T., and Rao, I. M., absorption and transpiration [in plants]. II. Cut shoots treated with different concentrations of sodium chloride, potassium nitrate, and formalin solutions, A., III, 499.

Ekeley, J. B., and Ronzio, A. R., structure of benzamidine-glyoxal and of its compounds with aromatic aldehydes, A., II, 350. Highly coloured condensation products from benzamidine and glyoxal. I., A., II, 392.

Ekhard, W., improvement [of flavour, stability, etc.] of oils, fats, etc., (P.), B., 1236.

Ekstedt, H. See Frey, C. N.

Ekwall, P., constitution of dilute soap solutions. I. Turbidity phenomenon of soap solutions, A., 1, 78. Surface activity of ions. II., A., I, 179. Existence and nature of acid soaps, A., I, 464.

Elander, M., Hägg, G., and Westgren, A., crystal structure of Cu₂Sb and Fe₂As,

A., I, 17.

Elastic Asphalt Co. See Gaiennie, G. B. Elbe, G. von, and Lewis, B., reaction between hydrogen and oxygen above the upper explosion limits, A., I, 312. Combustion of paraffin hydrocarbons, A., I, 416. Steady-state rate of a chain reaction for the case of chain destruction at walls of varying efficiencies, A., I, 416. Kinetics of the explosive reaction between hydrogen and oxygen sensitised by nitrogen peroxide, A., I, 621. Kinetics of the dry and water-catalysed reaction between carbon monoxide and oxygen at and above the upper explosion limit, A., I, 624. Hydrocarbon reactions and knock in the internal-combustion engine, B., 868.

Elbel, E., and Internat. Scientific Products Co., preparation for the teeth and the

mouth, (P.), B., 1282. Elden, C. A., and Cooney, J. W., Addis sediment count and blood-urea clearance test in normal pregnant women, A., III,

Elder, A. L., and Burkard, P. N., colloids in glacial acetic acid. I. Elements, chlorides, sulphides, and sulphates, A., I, 460.

Elder, F. C., hot-galvanised articles, (P.), B., 799.

Elder, J. L. See Schmidt, L. D. Elder, L. W., jun., staling versus rancidity in roasted coffee, B., 493.

Elder, M. E., preparation of crude bios V, and its influence on reproduction of certain micro-organisms, A., III, 70.

Eldridge, H., aluminium furnace [for electrothermal reduction of bauxite], (P.), B., 1072.

Eldridge, J. A., mean free path for gas beams in mercury vapour, A., I, 506. Eldridge, M. See Korenchevsky, V.

Electric Furnace Co., thermocouples for use in temperature-control systems of electric furnaces, (P.), B., 460. Heat-treatment of metals, (P.), B., 1359.

See also Cope, F. T.

Electric Smelting & Aluminum Co., recovery of alumina from aluminous siliceous material containing a substantial proportion of silica, (P.), B., 668. Washing fibrous materials, (P.), B., 773.

See also Cowles, E.

Electric Storage Battery Co. See Kershaw, W. E.

Electro Metallurgical Co., Bccket, F. M., and Franks, R., seamless steel-alloy vessels [tubes], (P.), B., 249. Alloy steels and welding rods, (P.), B., 932. and Chadwick, C. G., welding of alloy

steels, (P.), B., 458.

and Franks, R., chromium steel seamless tubes, (P.), B., 147. Welding rods, (P.), B., 458. Welding of alloy steels, (P.), B., 932. and Read, W. C., [high-nitrogen ferro-

chromium] alloys, (P.), B., 360*. See also Becket, F. M., Kinzel, A. B.,

and Read, W. C.

Electroblacks, Inc. See Jakosky, J.J.Electrolnx, Ltd., and Platen-Munters Refrigerating System Aktieb., production of cold by vaporisation of liquid fuel in connexion with internal-combustion engines, (P.), B., 1305.

Electrolytic Zinc Co. of Australasia, Ltd., metallic [zinc] dust, (P.), B., 456.

Bearing-metal alloys, (P.), B., 456.

Electrons, Inc. See Edwards, D. V. Elefthériou, D. S., selective passage of hormones across the uterine epithelium, A., III, 37, 101. Diffusion of hormones; folliculin, A., III, 101.

Elek, A., and Harte, R. A., volumetric determination of iodine using the Elek-Hill micro-bomb, A., I, 631.

Elektrochemische Werke München Akt .-Ges., hydrogen peroxide, (P.), B., 343.

Elenbaas, W., gradient of the high-pressure discharge in various metal vapours, A., I, 486.

Elford. W. J., preparation of membranes having graded porosities; properties of "gradacol" membranes as ultra-

filters, A., I, 480.
and Galloway, I. A., centrifugation studies. III. Viruses of foot-andmouth disease and vesicular stomatitis, A., III, 276. See also Welsch, M.

Elg, S., lattice constant of quartz and measurement of the Ka wave-length of 45Rh, 46Pd, and 47Ag, A., I, 436.

Elger, F., and Hoffmann-La Roche, process for vitaminising foods, (P.), B.,

Elgin, J. C. See Appel, F. J.

Elgort, M. S., physico-chemical analysis of systems containing diamines; viscosity and m.p. of the system ethylenediamine-methyl alcohol, A., I, 295.

Elgot, S. A., rapid testing of steel for susceptibility to growth of austenite grains

during heating, B., 351.

Eliagina, E. J. See Samorodnitzki, N. J. Elian, A. J., and Vacuum Process Mineral Extracting Co., settling and clarifying liquids, semi-liquids, and pulps containing finely-divided particles of matter, (P.), B., 1147.

Elian, J. See Lebedenko, N. Elias, N. M., [sound-]insulating material, (P.), B., 41. Alkali silicate heat and sound-insulating composition, (P.), B.,

Eliashevitsch, M., and Stepanov, B., dependence of predissociation limit on rotational energy, A., I, 348.

Eliason, E. L. See Ravdin, I. S.

Elion, \hat{L} , influence of certain factors which facilitate baking on proteolytic enzymes of wheat flour, B., 1397.

Eliovson, E., technical aspects of sodium silicate manufacture, B., 540.

Elisafova, E. See Bogdanov, G. Eliseev, A. A. See Malov, S. I.

Eliseev, G. G., natural vacuum filtration, A., I, 380.

Elizalde, A. M., action of glucose on respiratory exchange of adrenalectomised dogs, A., III, 126.

Elizarova, S. S., quantitative catalase index in barley, A., III, 239.

Elkin, D. I., and Valikov, S. J., economics of preparation of pyrocatechol and pyrogallol from wood tars and aromatic substances derived from lignin, B.,

Elle, D., absorption of centimetre waves in liquids and solutions, A., I, 551.

Elledge, H. G., Hirsch, A., and Diamond Alkali Co., recovery of strontium [as sulphate], (P.), B., 668.

Ellestad, R. B. See Bowen, N. L.

Ellett, A., and Cohen, V. W., velocity

analysis of potassium atoms scattered by magnesium oxide, A., I, 592.

See also Cohen, V. W., and Petersen, R. Ellinger, F., colloids and biological effect of radiation, A., I, 78. Absorption spectroscopy in the ultra-violet. I. Absorption spectra of proteins, carbo-hydrates, and fats, including their constituents and decomposition products, A., I, 494.

Ellinger, G. A., and Bibber, L. C., laboratory corrosion tests of welded Iow-carbon

stainless steel, B., 446. Ellinger, K. G. See Kindler, K.

Ellingham, G. H., Iocal anæsthetics, A., III, 178.

Ellingworth, S. See Imperial Chem. Industries.

Elliot, A. H. See Bischoff, F.
Elliot, C. S., laboratory kiln for development of kiln-drying schedules [for timber], B., 1345.

Elliott, \tilde{A} ., and Cameron, W. H. B. high-dispersion prism spectrographs and barometric pressure, A., I, 152. Emission band spectrum of chlorine-1, A., I, 271.

Elliott, E. B. See Dietz, V.

Elliott, K. A. C., and Greig, M. E., metabolism of lactic and pyruvic acids in normal and tumour tissues. IV. Formation of succinate, A., III, 347.

Elliott, K. A. C., Greig, M. E., and Benoy, M. P., metabolism of lactic and pyruvic acids in normal and tumour tissues. III. Rat liver, brain, and testis, A., III, 347.

See also Benoy, M. P.

Elliott, M. See Toennies, G.

Elliott, N., re-determination of the carbonoxygen distance in calcite and the nitrogen-oxygen distance in sodium nitrate, A., I, 445.

Elliott, R., [massecuite] crystallisers and their control, B., 960.

Elliott, R. B. See Du Pont de Nemours & Co., E. I.

Elliott, R. L. See Hodgson, H. H.

Ellis, B. A., and Jones, R. A., condensation of maleic anhydride with tung oil; new "constant" for oils, B., 152.

Ellis, C., tailoring the long molecule;

plastics, B., 60.

and Chadeloid Chem. Co., finish-removing

process, (P.), B., 159.

and Ellis-Foster Co., transparent tissue, (P.), B., 129. Water-resistant sandpaper and other abrasive papers, (P.), B., 140. Reaction products, (P.), B., 471. Diene-typo reaction products, (P.), B., 471. Varnish basis [from cashew liquid], (P.), B., 472. Surface finishes of paint, varnish, enamel, and lacquer type comprising a baked coating carrying a synthetic resin, (P.), B., 472. [Resinous] petroleum oxidation products and their utilisation, (P.), B., 700.

Horst, W. P. ter, and Ellis-Foster Co., sulphur-containing plastic, (P.), B.,

and Procter & Gamble Co., spray-dried soap, (P.), B., 942.

Sec also Standard-I. G. Co., and Standard Oil Development Co.

Ellis, C. B., interpretation of the absorption spectra of crystals and solutions of rare-earth salts, A., I, 547.

Ellis, C. D., Cockcroft, J. D., Pierls, R., and Richardson, H. O. W., discussion on β -type of nuclear transformations, A., I, 544.

and Henderson, W. J., artificial radioactivity produced in magnesium by a-particles, A., I, 5.

Ellis, E. E. See U.S. Steel Corp.
Ellis, E. H., Rapkin, D., and Rudolf, N.,
carbonate meter, B., 915.

Ellis, E. L. See Borsook, H. Ellis, E. W., determination of lead in doctor solution, B., 108.

Ellis, G., and Maynard, L. A., effect of low levels of fluorine intake on bones and teeth, A., III, 95. Determination of phospholipins in ox blood, A., III, 248.

Ellis, \hat{G} . \hat{H} ., and Insulite Co., fibrous product, (P.), B., 129. Synthetio [board-like] products, (P.), B., 129. Synthetic products [hard board], (P.), B., 431. Heat- and sound-insulating composition, (P.), B., 1210.

See also Brit. Celanese. Ellis, H., gases in ferrous metals, B., 1351. Ellis, J. See Stout, L. E.

Ellis, J. C. B. See Watson, J. A. S. Ellis, J. W., and Lyon, W. K., 2.73μ absorption band of fused silica, A., I,

See also Kinsey, E. L.

Ellis, L. N., and Zmachinsky, A., sparing action of lactoflavin on vitamin- \bar{B}_1 , A., III. 494.

Ellis, M. See Krause, L. Ellis, M. D. See Ellis, M. M.

Ellis, M. M., Motley, H. L., Ellis, M. D., and Jones, R. O., selenium poisoning in fish, A., III, 427.

Ellis, N. R. See King, F. B., and Titus, H. W.

Ellis, O. W., crystalline manganese sulphide in chilled cast iron, B., 1212. Wear tests on ferrous alloys, B., 1216. Effect of pouring temperature on structure of bearing metals, B., 1221. Gordon, J. R., and Farnham, G. S.,

wear-resistance of white cast iron, B.,

Ellis, R. C. See Dorrance, R. L.

Ellis, R. W., analyses of New Mexico coals, B., 309.

Denny, E. H., Young, W. H., Snyder, N. H., Fieldner, A. C., Cooper, H. M., and Osgood, F. D., analyses of New Mexico coals, B., 636. Ellis-Foster Co. See Ellis, C.

Ellison, E. T., and Burch, J. C., effect of cestrogenio substances on the pituitary, adrenals, and ovaries, A., III, 229.

Ellison, J. B., and Moore, T., vitamin-A and carotene. XIV. Vitamin-A reserves of the human infant and child in health and disease, A., III, 76.

Ellison, R. W., determination of silica in

clays, B., 671.

Ellman, P., and Taylor, J. H., oxygen and carbon dioxide subcutaneous tissue gas tensions in cases of hypertension, A., III, 335.

See also Abbasy, M. A.

Ellms, E. H. See Barrett Co. Ellsworth, D. C. See Du Pont de Nemours & Co., E. I.

Ellsworth, H. C. See Stehle, R. L.

Ellsworth, J. See Dufay, J.

Ellsworth, R., and Nicholson, W. M., change in electrolytes of urine following injection of parathyroid extract, A., III,

Ellwood, W. B., and Legg, V. E., magnetic losses at low flux densities in 35 Perm-

alloy sheet, B., 928.

Ellyett, C. D., heats of reaction and specific heats of aniline-o-chlorophenol mixtures and a test of Macleod's viscosity equation, A., I, 507. Refractive indices of aniline-o-chlorophenol mixtures and the nature of the molecular compound, A., II, 454.

Elman, R., intravenous injection of aminoacids in regeneration of scrum-protein following severe experimental hæmorrhage, A., III, 419.

El Mangouri, H. A., separation of carbonyl compounds from wax, A., III, 503. See also Blount, B. K., and Chibnall,

A. C. Elmer, A. W., Giedosz, B., and Scheps, $M_{\cdot,\cdot}$

pancreas-stimulating hormone of pituitary anterior lobe, A., III, 184. Cortexand medulla-stimulating action of the anterior lobe of the pituitary gland, A., III, 401. Immediate hyperglycæmic and anti-insulin action of anterior lobe of the pituitary gland and of blood in acromegaly, A., III, 401.

Elmer, G. D. See Roblson, F. W. Elmer, R. B. See Mouchel & Partners, R. B.

Elmore, J. C., tomato pinworm, B., 1254. and Richardson, C. H., toxic action of formaldehyde on the adult house fly,

Elmore, W. C., properties of the surface magnetisation $_{
m in}$ ferromagnetic crystals, A., I, 449.

and McKeehan, L. W., surface magnetisation and block structure of ferrite, A., I, 400.

Elmquist, H. See Kylin, E.

Elmquist, R. E., and Downey, K. M., ironing as a factor in deterioration of cotton fabrics, B., 423.

See also Hays, M. B.

Elmslie, W. P., Caldwell, P., and Moorman Manufg. Co., anthelmintic [for livestock], (P.), B., 88.

Elöd, E., and Schachowskoy, T., mordanting and dycing processes. XXXI. Theory of mineral tannage, B., 475.

Schachowskoy, T., and Sinn, R., mordanting and dyeing processes. XXXII. Theory of mineral tannage, B., 1094.

and Vogel, F., bleaching [of cellulosic fibres | with chlorine, B., 659.

See also Freudenberg G.m.b.H., C.

Elovitz, S. See Charachorin, F. El Ridi, M. S. See Gillam, A. E.

Elsasser, W. M., self-consistent field and Bohr's nuclear model, A., I, IIO. Series of nuclear levels, A., I, 275.

Elsdon, G. D., and Stubbs, J. R., detection of inhaled hydrocyanic acid, A., III, 391. Elsen, G., modern quantum mechanics and the benzene problem. III., A., I, 15.

El Shurbagy, M. R. See Malkin, T. Elsner, H., Broser, W., and Bürgel, E., occurrence of a substance in red algawhich inhibits blood-coagulation, A., III, 250.

Elsom, K. A., Bott, P. A., and Walker, A. M., simultaneous measurement of renal blood flow and excretion of hippuran and phenol-red by the kidney, $\hat{\mathbf{A}}$., İII, 380.

Elson, L. A. See Imperial Chem. Industries. Elteren, J. F. van. See Voet, A. Elting, E. C., La Master, J. P., and Mitchell,

 \underline{J} . H., analyses of carpet grass and Bermuda grass, B., 1388.

Eltinge, E. T., effect of boron deficiency on structure of Zea mais, A., III, 237.

Eltzin, I. A., theory of removal of gas from a metal at high temperature, A., I, 24. See also Romanov, V. I.

Elvehiem, C. A., biological methods for vitamin-B complexes, A., III, 76. Madden, R. J., Strong, F. M., and Wool-

ley, D. W., relation of nicotinic acid and nicotinamide to canine black tongue, A., III, 418.

Siemens, A., and Mendenhall, D. R., effect of iron and copper therapy on hamoglobin content of blood of infants, A., ĬII, 11.

See also Arnold, A., Bird, H. R., Borgen, D. R., Frost, D. V., Kline, O. L., Keehn, C. J., jun., Kohler, G. O., Pavcek, P. L., Pearson, P. B., Potter, V. R., Schultze, M. O., and Sherman, W. C.

Embirikos, N., and Bittel, H., reversible and irreversible magnetisation processes with change of temperature, A., I, 69.

Embree, N. D. See Hickman, K. C. D. Emeléus, H. J., reactions in liquid ammonia and liquid sulphur dioxide, A., I, 574,

and Briscoe, H. V. A., preparation and properties of dideuteromethylamine, A., II, 88. See also Anderson, J. S.

Emelens, K. G., and Brown, W. L., probe test for positive space-charge, A., I, 2. Greeves, F. D., and Montgomery, E.,

glow discharges in helium, A., I, 1, and Lunt, R. W., chemical reaction in electric discharges. I. Statistical theory of discharge reaction, A., I, 2.

Lunt, R. W., and Meek, C. A., ionisation, excitation, and chemical reaction in uniform electric fields. I. Townsend coefficient of ionisation, A., I, 7. Emendorfer, E. H. See Agar, W. M.

Emerique, L., avitaminosis-A and nitrogen metabolism, A., III, 152.

Emerson, George A., effects of anæsthesia on autoxidation of surviving brain tissue, A., III, 65. Effect of ether on the gut, A., III, 178.

See also Phatak, N. M.

Emerson, Gladys A., and Evans, H. M., effect of vitamin-E deficiency on growth, A., III, 497.

Emerson, K., jun. See Marshall, E. K., jun. Emerson, O. H. See Olcott, H. S., and Weindling, R.

Emerson, R., and Green, L. Blackman reaction in photosynthesis, A., III, 501.

Emerson, R. L., and Woodward, R. B. pressure regulator for vacuum distillation, A., I, 481.

See also Present, S. C. Emerson, W. B., compressibility of fusedquartz glass at atmospheric pressure, A., I, 450.

Emery, F. E., augmentation of ovarian weights as effected by zinc sulphate, antuitrin-S, and thyroid implants, A., III, 401. Augmentation of the gonadstimulating pituitary hormone by copper, A., III, 438.

and Schwabe, E. L., rôle of corpora lutea in prolonging life of adrenal-ectomised rats, A., III, 38.

Emery Industries, Inc. See Reddish, W. T. Emicke, O., and Lucas, K. H., resistance to deformation of copper in hot-rolling, B., 568.

Eminov, E. A., Plachuta, N. I., and Lantzevitzkaja, L. L., accelerated determination of sulphur in heavy petroleum fractions, B., 1156.

Emmanuel-Zavizziano, (Mme.) H. See Haissinsky, M.

Emmel, M. W., and Henley, W. W., effect of feeding p-dichlorobenzene-treated maize to swine, B., 1404.

Emmel, V. M. See Rakestraw, N. W. Emmens, H. See N. V. Philips Gloeilampenfabr., and Radio Corp. of America.

Emmerie, A., chemical determination of flavin in urine, liver, and milk, A., III, 325.

See also Eekelen, M. van.

Emmermann, C., albedo loss in coating

barytes paper with emulsion, B., 730. Emmert, E. M., determining soil moisture, B., 376. Correlation of soluble nitrogen and phosphate in conducting tissues of potatoes at various stages of growth with yield, B., 598.

Emmett, P. H., and Brunauer, S., use of low-temperature van der Waals adsorption isotherms in determining the surface area of iron synthetic ammonia catalysts, A., I, 510. Use of adsorption isotherms for measuring surface areas of catalysts and other finely-divided materials, B., 541.

Emmons, R. C., and Wilcox, R., mineralogio study of silicosis, A., I, 484. Emmons, W. H., origin of systems of orebearing fractures, A., I, 52.

Emödi, G., and Sárkány, E., kinetics of the fermentation of yeast, A., III, 222.

Empey, W. A., heat-sterilisation of beefwrapping materials, B., 533.

Empire Oil & Refining Co. See Walker, J.C.Emschwiller, G., optimum chemical re-activity of adsorbed gases at their critical temperatures, A., I, 142.

and Lecomte, J., infra-red absorption spectra and modes of vibration of some C₁ and C₂ halogen derivatives, A., I, 343.

Emslander, E., influence of various process factors on low-temperature stability of beer, B., 485.

Emslie, A. G., diffraction of slow positive ions, A., I, 542.

Emsweller, S. L., Burrell, P. C., and Borthwick, H. A., inheritance of carotene in carrots, A., III, 238.

Endell, K. See Heidtkamp, G., and Lehmann, Hans.

Ender, F., individuality of osmotic behaviour of alkali carbonates, A., I, 302. Technique of electrolytic conductivity

measurement, A., I, 332. Ender, W., and Müller, A., theory of dyeing wool with acid dyes. I. Combination of wool with free dye acids. II. Dependence of free dye-acid absorption on the p_H of the dye liquor. III. Behaviour of acid dyes towards wool on the alkaline side of its isoelectric point, B., 1194, 1326.

Endermann, F. See Fischer, Hans.

Enders, C., turbidity in wort and beer.
III. Chill-haze, B., 829.
and Kärnbach, K., determination of

yeast with the Lange colorimeter, B., 829.

Pfahler, A., and Schneebauer, F., rapid determination of germinative capacity of barley and malt, B., 1394.

and Schneebauer, F., rapid determination of germinative capacity of barley, B., 1115.

and Spiegl, A., turbidity in wort and beer. II. Composition and sedimentation of brewery sludge, B., 485.

and Theis, K., polarographic studies on beers and melanoidin solutions, B., 1116.

and Wieninger, F. M., influence of alkaloids on fermentative power and multiplication of yeast, A., III, 484.

See also Lüers, H. Enders, W., strength of steel at blue-heat temperatures, B., 790.

and Lueg, W., stress-expansion relationship for steel at 50—320°, B., 680.

Endish, O. See Stather, F.

Endô, H., and Kawasé, H., contact effects of glass and platinum on solution of iron and steel in nitric acid of various concentrations, A., I, 252.

and Morioka, S., corrosion of magnesium alloys. II. Magnesium ternary alloys, B., 1066.

Endô, K., oxidation of iron and cementite and some properties of iron oxides, A., I,

Endowment Foundation. See Hamilton, C. C., Headlee, T. J., and Krueger, W. C. Endraszka, J., denaturation of animal and vegetable fats and oils, B., 584.

Endrédy, A. von, improvement of alkaline soils by formation of ponds used for fish breeding, B., 955.

Endres, G., and Kaufmann, (Frl.) L., determination of very small amounts of hydroxylamine, nitrite, and nitrate, A., I, 476.

Enfield Cycle Co., Ltd., and Guise, H. T., [automatically] cleaning metallic articles [prior to plating], (P.), B., 1362.

Engel, A. von, and Steenbeck, M., proof of the carrier laws for the mercury-vapour

rectifiers, A., I, 104. Engel, A. L. See Dietrich, W. F.

Engel, B. See Standard-I. G. Co. Engel, C. See Linderstrøm-Lang, K.

Engel, E., determination of velocity of solution of soap, B., 1078.

Engel, H., acidosis in plants, A., III, 158.

Engel, K. See Rupe, H. Engel, P., and Navratil, E., degradation of folliculin in cold-blooded animals, A., III, 491.

Sec also Silberstein, F.

Engeland, R., and Bastian, A., determination of proline in protein hydro-

lysates, A., III, 374. and Biehler, W., constituents of hydrochloric acid hydrolysates of elastin, A., Π , 357.

Engelfried, O. See Seidel, F.

Engelhard, F. G. W., industrial model of the Höppler viscosimeter, B., 1142.

Engelhardt, V. A., and Baev, A. A., formation of ammonia in avian erythrocytes and cell respiration, A., III, 109.

and Bukin, V. N., enzymic oxidation of ascorbic acid, A., III, 232. Stability of ascorbic and dehydroascorbic acids, A., III, 364.

Sec also Kolotilova, A. I.

Engelhardt, W. von, mineralogy of Mecklen-

burg soils, A., I, 206. Engelhardt, W. E., and Estler, W., acute narcotic action of aliphatic and aromatic hydrocarbons. I. Effect of single inspirations of various concentrations of benzine, benzene, toluene, and xylene on rabbits and cats, A., III, 64.

Engelke, H., importance of protein determinations in [plant] breeding: rapid micro-method, B., 1386. Reduction of time and cost in protein determinations on grain, B., 1397.

Engelkes, (Miss) A. D. See De Haas, W.J.

Engelmann, M. See Du Pont de Nemours & Co., E. I.

Engels, A., composition of sanidine anorthoclase from Drachenfels, Siebengebirge, A., I, 204.

Engels, O. See Bling, M. Engels, W. H., Weijlard, J., and Merck & Co., salts of [alkyl] esters of p-hydroxybenzoic acid, (P.), B., 761. [Alkalineearth] salts of esters of p-hydroxybenzoic acid, (P.), B., 1177.

Engelstein, M. A. See Pavlov, P. N.

Engert, E., and Internat. Precipitation Co., box collecting electrode for electrical precipitators, (P.), B., 695.

Engl, J., and Katz, J., relation between temperature and conical indentation hardness of metals, A., I, 403.

and Leventer, I. P., measurement of piezo-electric effects in crystalline powders, A., I, 402.

See also Bahrs, S., and Büttner, H. Engle, M. D., Pease Anthony gas scrubbers,

B., 1143. Engledow, F. L., quality in food from the agricultural point of view, B., 724.

Engler, W., deuterium compounds. III. Raman spectra of deuterium com-pounds of the type CD₃·CO·X, A., I, 345.

and Kohlrausch, K. W. F., Raman spectra of azoimide and carbon suboxide, A.,

Englert, O., Becker, W., and Becker, F., blanc fixe of particular softness, (P.), B.,

Englis, D. T., and Lynn, E. G., use of an electric heater for the Lane and Eynon titration of reducing sugars, B., 1114.

English, F. L., bromoil prints on ordinary enlargement paper, B., 500. English, J., jun. See Bonner, J.

English, L. L., control of citrus insects with oil emulsions, B., 603.

English Metal Powder Co., Ltd., and Meyersberg, H., metal ["bronze"] powders, (P.), B., 1227. ngs, W. See

Engs, See Griendt, G. H. van de, and Shell Development Co.

Enkes Naamlooze Vennootschap, ice cream and similar comestible products, (P.), B.,

Enklewitz, M., action of hydrogen peroxide on l-xyloketose (urine pentose), A., II, 6.

Enkvist, T., condensation of cyanoacetamide and formaldehyde. I. Condensation products under different conditions. II. Rate of reaction under differing conditions, A., II, 329, 403.

Ennevaara, E., rapid determination of cuprammonium viscosity of pulp, B., 125.

Enser, K. See Fulmek, L. Ensor, C. See Bachmann, G.

Enthoven & Sons, Ltd., H. J., and Harris, E. P., treatment of metals [lead] or alloys for separation or recovery of

metallic impurities or constituents [tellurium], (P.), B., 358.

Epelbaum, S. E., Chaikina, B. I., and Skvirska, E. B., effect of ago on phosphorus compounds of the brain, A., III, 7.

and Mischkis, M. S. effect of high environmental temperature on cerebral nitrogen metabolism, A., III, 128.

Epelbaum, V. A. See Kritschevski, I. R. Ephrussi, B., and Chevais, S., development of eye colours in Drosophila; relationship between pigmentation and release of diffusible substances, A., III, 388.

See also Beadle, G. W., and Khouvine, Y. Epik, P. A., and Remesnikova, E. G., determination of aluminium in ferrosilicon and ferrosilide, B., 352.

Epler, W. N., determination of lead in motor fuel, B., 1298.

Epprecht, A. See Erlenmeyer, H., and Schwarzenbach, G.

Eppright, E. S., and Smith, A. H., influence of dietary inorganic salts on ash of rat's tissues, A., III, 261. Influence of specific mineral deficiencies on growth of body and organs of the rat, A., III, 472.

Eppson, H. F. See Beath, O. A. Epstein, A. K., Harris, B. R., and Standard Brands, retarding staling of yeast-leavened bread, (P.), B., 617.

Epstein, D. A., development of synthetic ammonia, B., 1333.

and Viktorov, M. M., neutralisation of nitric acid with ammonia at atmospheric pressure, B., 664.

Epstein, Elias. See Davidson, D.

Epstein, Ely, reversal of charge of the disperse phase of organic and inorganic dispersoids by radon, A., 1, 615.

See also Peterman, M.G.Epstein, E.Z., and Greenspan, E.B., clinical significance of cholesterol distribution in plasma in hepatic and biliary diseases, A., III, 59.

Epstein, K. M. See Dain, B. J.

Epstein, P. S., equation of diffusion, A., I, 232.

Epstein, S. See Gonser, B. W.

Epstein, S. S., and Laufer, S., theories of fermentation, B., 718.

Equipment & Engineering Co., Ltd., and Swift, H. B., apparatus for magnetic detection of cracks in iron or steel, (P.), B., 249.

Eras, E. See Schoen, M.

Erastova, R., and Roganova, K., treatment of Japanese sardine oil, and their effect on the quality of the film obtained from the oil, B., 1367.

See also Dorn, C. Erb, C., Wood, H. G., and Werkman, C. H., aërobic dissimilation of lactic acid by propionic acid bacteria, A.,

See also Stone, R. W., and Wood, H. G.

Erba, I. See Caserio, E.

Erbacher, O., electrochemical coating of metal surfaces with a monatomic film of nobler metal, A., I, 84. Effect of pretreatment of metal surfaces on electrochemical separation, A., I, 84. Placo of discharge in electrochemical exchange without local action; comparison of platinum surfaces from different sources in respect of activity for hydrogen and for hydrogen peroxide catalysis, A., I, 625.
and Philipp, K., separation of un-

weighably small amounts of artificially radioactive phosphorus from the stable

isotope, A., I, 438.

Erben, F., effect of solvents on therapeutic activity of irradiated ergosterol, A., III, 156.

Erber, W., complete analysis of chromeiron ore and chromite refractories, B.,

Erbinger, E., testing machine for producing alternating tensile and compression forces, B., 509.

Erbring, H., spinning properties of liquids. III. Spinning power of lyophilic colloidal solutions and mechanical properties of threads formed from them. IV. Liquefying effect of calcium salts on gelatin, Å., Ĭ, 28, 461.

Erbslöh, S., highly swellable inorganic substances [bentonite], (P.), B., 239. Ercklentz, B. W. See Ercklentz, W. Ercklentz, W., and Ercklentz, B. W.,

anti-histamine action in the organism by Torantil, A., III, 136.

Ercoli, A., and Mamoli, L., application of Darzens' reactions to dehydroandrosterone, A., II, 459.

Erdey-Gruz, T., Grotthus conductivity of molten electrolytes, A., I, 64.

and Frankl, E., electrolytic growth of metal crystals. III. Growth of copper crystals from aqueous solutions, A., I. 316.

and Kardos, R. F., electrolytic growth of metal crystals. II. Growth of silver crystals from molten salts, A., I, 316.

Erdheim, E., reducing properties of fuller's earth, A., I, 474. Individual suitability of different kinds of bleaching earth for bleaching various oils, B., 464. Mode of action of decolorising earths, B., 509. Aluminium and ferric sulphates as decolorants, B., 541. Action of decolorising earths in aqueous media, B., 605. Application of decolorising earths in the sugar industry, B., 605. See also Berczeller, A.

Erdman, E. A., transparent mounting for

micro-sections, A., Î, 202. Erdmann, W., sprayed coatings of aluminium-magnesium alloys on other metals, B., 1223.

Erdős, L. See Ivánovics, G. Erdős, S., and Bittera, J., Röntgen rays of great penetrating capacity, (P.), B., 57. Erdtman, H., constitution of resin phenols and their biogenetic relationships. III. Constitution of the aromatic groups in pinoresinol. IV. Molecular symmetry of pinoresinol and cudesmin. V. Natural phenolic sub-stances of the "dimeric coniferyl type," A., II, 28, 69. Methylation of 3-amino-2-methylindole; new isomeride of gramine (donaxine), A., II,

and Löfgren, N., new group of local anæsthetics. I. a-Dialkylamino-acid

anilides, B., 1130. See also Aulin, G.

Eremenko, V. J., influence of temperature of drying of blast-furnace slag on the hydraulic properties of slag cement, B.,

Eremin, E. N., Vassiliev, S. S., and Kobosev, N. I., oxidation of nitrogen in the high-frequency luminescent discharge. I. and II., A., I, 316; B., 541.

Erényi, G., detection of zinc in the presence

of iron, A., I, 632.

Ergle, D. R., carbohydrate content of cotton plants at different growth periods, and influence of fertilisers, B., 1253.

See also Jordan, H. V. Erhard, P. Sec Decherd, G., and Herrmann, Georges.

Erichsen, A. M., casting of metal ingots,

(P.), B., 1229. Erickson, B. N., Williams, H. H., Hummel, F. C., Lee, P., and Macy, I. G., lipin and mineral distribution of serum and erythrocytes in hæmolytic and hypochromic anæmias of childhood, A., III, 255.

Williams, H. H., Hummel, F. C., and Macy, I. G., lipin and mineral distribution in the serum and erythrocytes of normal children, A., III, 164.

See also Williams, H. H.

Erickson, C. L. See Fuller, C. S. Erickson, E. T. See Wells, R. C.

Ericksson, E., and Standard Process Corp. electroplating apparatus, (P.), B., 1361. Ericsson, C. O. See Christiansen, E.

Erie City Iron Works. See Kaemmerling. G. H.

Erighian, S. See Contardi, A. Eriksen, F. See Larsen, V. Eriksen, T. S. See Euler, H. von. Eriksen, S. E., and Insko, W. M., jun., effect of cod-liver oil on the iron and copper contents of egg yolk, A., III, 493.

Eriksson, H. A. S., ionisation energy of Li⁺ and He, A., I, 487.

Eriksson, S. See Torstensson, G.

Eriksson-Quensel, I. B. See Tiselius, A. Erith's Engineering Co., Ltd., and Ferguson, A. W. B., clinker grinders, (P.), B.,

Erk, S., resistance to flow of lubricating oils at low temperatures, B., 871.

Keller, A., and Poltz, H., thermal conductivity of synthetic substances, A., I, 427.

Erlenmeyer, H., and Epprecht, A., pre-paration of amino-3-pyridylmethane, A., II, 387.

Epprecht, A., and Meyenburg, H. von, normal acidity potential of thiazole-5carboxylic acid, A., I, 241. Behaviour of ethyl thiazole-5-carboxylate methiodide on reduction, A., II, 264.

Fischer, H. O. L., and Baer, E., synthesis of a glycerol- d_1 from optically active isopropylidene-d-glyceraldehyde, II, 439.

and Lobeck, H., acetyltrideuterocholine, A., II, 89.

and Meyenburg, H. von, preparation and properties of thiazole compounds, A., II, 216.

and Schenkel, H., optical rotatory power of hydrogen and deuterium compounds, A., I, 66. D₂O and H₂O as solvents for optically active materials, A., I, 75.

Schenkel, H., and Epprecht, A., deuterium as an indicator in stereochemical investigations, A., II, 18. Investigation of catalytic racemisation with deuterium as indicator, A., II, 252.

and Schoenauer, W., Kolbe's electrochemical synthesis in deuterium oxide, A., I, 254. Synthesis of trans-transmuconic acid from fumaric acid, A., II, 440. Thermal decomposition of dibenzoyl peroxide in presence of deuterium, A., II, 498.

Schoenauer, W., and Schwarzenbach, G., isotope exchange in water and deuter-

ium oxide, A., I, 416.

Schoenauer, W., and Süllmann, H., chemical and biochemical dehydrogenation of aa'-dideuterosuccinic acid, A., II, 48.

and Verzár, F., does heavy water influence physiological processes? A., III, 22.

See also Schwarzenbach, G.

Erluikova, T. See Vanscheidt, A.

Ermakov. See Lotorev.

Ermakov, A., refractometric determination of oil in seeds, B., 366. Ermolenko, N. See under Jermolenko,

Ermuzevitsch, D. V., and Klimovskaja, M. F., determination of apparent density of coal, B., 311.

Ernst, E., dependence of shift-rate of the planes of a growing crystal on the surroundings, A., I, 447.

and Truka, J., electrostriction of strong electrolytes, A., I, 131.

Ernst, T. See Lustig, B. Ernst, W. H., potential gradient in negative dark space of normal glow discharge, A., I, 54.

Ernst, Z. See Krause, A.

Erofeev, B. V., reactions between solid substances. I. Kinetics of reactions of polycrystalline substances, A., I, 623.

Errera, J., structure of liquids studied in the infra-red, A., I, 112.

and Mollet, P., intermolecular forces and O-H absorption bands in [aliphatic] alcohols at 3μ , A., I, 9. OH band of monomolecules of [ethyl] alcohol in the 3μ region, A., I, 167.

See also Bosschieter, G., and Claeys, J. Errington, K. D. See Linstead, R. P.

Erschler, B., application of ultrafiltration for separation of colloids and crystalloids, A., I, 27. Total volume of the disperse phase in gelatin sols, A., I, 28. and Proskurnin, M., capacity of a bright

platinum electrode in various electrolytes, and its dependence on treatment of the electrode, A., I, 245.

Erschov, N. V., and Fedotova, E. N., synthesis of aminocymene, and its use as an antiknock for motor fuel, B., 875.

Erschova, V. See Tiutiunnikov, B. Erstad, B., sulphite spirit, B., 26.

Erstropiev, K. S., electrical conductivity of molten glass at 600—1400°, B., 37. Eru, I. I. See under Jeru, I. I.

Erve, J. van de. See Kinaird, F. W.

Erxleben, H., inactivation of the auxins, A., III, 286.

See also Kögl, F.

Erygin, P. S., change in activity of enzymes, soluble carbohydrates, and intensity of respiration of rice seeds germinating

under water, A., III, 239.
Erziutova, E. See Laptev, A.
Esafov, V. I., acetone compounds of dihydroxy-acids. I. Acetonation of θ_{l}

dihydrostearic acid, A., II, 176.
Esau, A., and Bäz, G., dispersion and absorption with ultra-short waves; reflexion and absorption determinations in water and alcohols with centimetre waves, A., I, 601.

Escallier, G. See Loeper, M. Esch, W., driving belts and conveyor-

belting from rubbered fabrics, B., 231. Reinforcement of rubber by gas black, B., 473. Eraser rubbers, B., 473. Easy-flowing gas black, B., 638. From natural gas to printing ink, B., 638. Packing sheet [containing rubber], B., 771. Comparison between channel gas black and "soft" blacks [for rubber mixes], B., 815. Gelation of rubber solutions containing sulphur, B., 1091.

See also Schürmann, E. Escher, E. See Karrer, P.

Eschevskaja, M. P. See Dintzes, A. I. Eschtschenko, A. See Krestinski, V. N. Escobar, G., action of lachesis venom, A., III, 200.

Escolar, L. G. See Del Campo, A. Escribens, M. R., advantages of chemical control in molinar and related industries, B., 79.

Escudero, A., and Bosq, P., influence of carotene on experimental calculosis in avitaminosis-A, A., III, 43.

Esenwein, P. See Schläpfer, P. Espe, D. L. See Cannon, C. Y., and

Shoptaw, L. Espenschied, H. See Cole, S. S.

Espil, L., Genevois, L., Peynaud, E., and Ribereau-Gayon, J., [bacterial] formation of esters of ethyl alcohol, A., III,

433. and Peynaud, E., determination of neutral esters in fermentation media, B., 719. Determination of esters in fermented liquors, B., 830.

Espy, L. See Chevallier, A.

Esselen, G. J., Scott, W. M., and Hooker Electrochem. Co., impregnation [weighting] of textile [silk and rayon] materials, (P.), B., 433.

Talbot, W. F., and Union Wadding Co.,

filtering medium, (P.), B., 634. Esselen, W. B., jun., influence of fruits on fæcal flora and intestinal reaction in diets of rats, A., III, 216.

Essential Oil Sub-Committee, determination of esters [in essential oils], B., 1134.

Esser, H., allotropy of iron, A., I, 291. Essers, G., optical investigation of thin silver and silver iodide layers, A., I, 173.

Essex, H. E. See Soskin, S. Essig, E. O., and Michelbacher, A. E., important tomato insects of California. B., 603.

Essin, O., and Alfimeeva, E., cathodic polarisation in deposition of copper and zinc from solutions of complex cyanides, A., I, 140.

Antropov, L., and Levin, A., time dependence of electrodic polarisation. I. Over-polarisation in discharge of copper ions on a copper cathode, A., I, 365.

and Beklemischeva, T., simultaneous discharge of cadmium and hydrogen ions from solutions of complex cyanide salts, A., I, 140.

and Levin, A., cathode polarisation in precipitation of zinc from solutions of

its simple salts, A., I, 140.
Estabrook, J. B. See Lykken, H. G.
Esteřák, K. B. See Bank, O.

Estermann, I., Simpson, O. C., and Stern, O., magnetic moment of the proton, A., I, 592.

See also Halpern, J.

Esterson, M. M. See under Tumbler Labs.

Estienny, Jalibert. See Estienny, Jean. Estienny, Jean, and Estienny, Jalibert, polypeptidæmia during normal gestation, A., ÎH, 15.

Estival, J., gasification of low-grade fuels from viewpoint of synthetic production of motor spirit or methyl alcohol, B., 313.

Estler, W., acute narcotic action of aliphatic and aromatic hydrocarbons. II. Effects of repeated inspirations on white mice, A., III, 64.

See also Engelhardt, W. E. Estradère, (Mlle.) S., relations between octane numbers, cracking, and oxidation of hydrocarbons, and their thermal

effects, B., 315. Esveld, L. W. van, evaluation of digitalis preparations by oral administration, A., ĪII, 267.

Établissements Anguste & des Moutis, obturators for homogenising machines, (P.), B., 197.

Établ. Flinois, Colmant, & Cuvelier, Colmant & Cuvelier Succrs., Société Anonyme, impregnating and coating of textile threads, (P.), B., 433.

Etabl. Lambiotte Frères. See Soc. des

Prod. Chim. de Clamency.

Etabl. A. Olier, plant for solvent extraction of edible oils and fatty materials, B.,

Etabl. Sareb, Société Anonyme, purified (pale) glycyrrhizin, (P.), B., 1273.

Etcheverry, A. O., effect of vagotomy on blood-sugar curves produced by glucose or insulin, A., III, 451. Pancreatic and pituitary diabetes in vagotomised dogs, A., III, 461.

Etcheverry, A. O., effect of enervation of the pancreas or the liver or of abdominal sympathectomy on sugar regulation in dogs, A., III, 473. Vagus stimulation and insulin secretion, A., III, 473.

Etheridge, W. See Key, A. Etienne, A. D. See Schicktanz, S. T. Etienne, H. See Chandelle, R.

Etienne-Martin, P., and Plan, P., effect of infra-red rays on disintegration of homologous proteins injected into the guinea-pig, A., III, 175. Effect of infrared rays on post-traumatic blood-polypeptide curve in guinea-pigs, A., III,

See also under Martin, P. E.

Etinburg, E., hydrogenation of fats in presence of nickel carbonate reduced in the oil, B., 364.

and Popov, $M_{\cdot \cdot}$, operation with nickel formate catalyst, B., 366. Hydrogenation of fats in presence of nickel carbonate and formate reduced in the oil, B., 584.

Sterlin, B., and Kruschevski, B., selective hydrogenation [of vegetable fats], B.,

Étrillard, and Lambert, (Mme.), influence of nitrites in water sterilisation by chlorine, B., 1414.

Etrillard, P. See Guillerd, A.
Ets, H. N., effect of potassium on cold blocking of spider crab nerve, A., III, 214. Ettinger, G. H., and Hall, G. E., synergy of adrenaline and acetylcholine on pulmonary blood vessels in rabbits, A., III, 216.

See also Hall, G. E.

Ettisch, G., electrolytic properties of proteins and their structure, A., I, 615. and Da Costa, S. F. G., utilisation of oils as perfusates, A., III, 308.

Ettori, \hat{J} ., and Grangaud, R., autoxidation and inorganic catalysis and activity of the ascorbic acid oxidase, A., III, 155. Etwanik, J., air-cooled suspended furnace roofs, (P.), B., 509.

Etzelmiller, R. E. See Du Pont de Nemours

& Co., E. I.

Etzkorn, R., and North Amer. Rayon Corp., apparatus for manufacture of artificial

silk, (P.), B., 128.
Etzrodt, H. See Awe, W.
Eucken, A., Pictet-Trouton rule for monatomic substances, A., I, 186. Exchange of energy and matter at bounding surfaces, A., I, 224. Vapour pressures of metals, A., I, 231. Thermal properties of heavy and light hydrogen at low temperatures, A., I,

and Nümann, E., collision excitation of intramolecular vibrations in gases and gas mixtures. IV. Sound dispersion and absorption measurements in nitrous oxide and carbon dioxide at high temperatures, A., I, 504.

and Riedel, L., experimental determination of free wave-length of electrons in lead and cadmium, A., I, 3.

and Veith, H., molecular heat of methane in solid mixtures of methane and krypton, A., I, 74. Effect of thermal pretreatment on molecular heat of condensed nitrous oxide, A., I, 353.

Eucken, E. See Bartholomé, E. Eufinger, H., and Gaehtgens, G., effect of vitamin-C on the pathologically modified blood picture [leucocythæmia], A., III, 154.

Eulenstein, F., and Krus, A., production of iron in rotary furnaces, B., 917.

Euler, H., interaction in heavy atomic

nuclei, A., I, 214, 341.

Euler, H. von, top yeast, A., III, 33. Dehydrogenase systems, A., III, 66. Cozymase, A., III, 483. Co-enzymes, A., III, 483.

and Adler, Erich, participation of adenosine triphosphate in enzymic dehydrogenation of hexoses, A., III, 31. Binding of cozymase [to colloidal carriers] and a fermentation inhibitor present in yeast, A., III, 31. Enzymic mechanism of oxidation-reduction processes in fermentation and glycolysis, A., III, 69. Participation of adenylic acid and cozymase in phosphorylation, A., III, 69. Phosphatetransferring co-enzymes (co-phosphorylases), A., III, 180. Adler, Erich, and Eriksen, T. S., com-

ponents of dehydrogenase systems. XIV. Glutamic acid dehydrogenase from yeast, A., III, 392.

Adler, Erich, and Günther, G., dehydrogenase systems of muscle and Jensen sarcoma in the rat, A., III, 268. Components of dehydrogenase systems. XV. Dehydrogenation of aglycerophosphoric acid in the animal body, A., III, 428.

Adler, Erich, Günther, G., Heiwinkel, H., and Vestin, R., cozymase and co-phosphorylase. I. Co-enzyme of phosphorylation. II. Differentiation of codehydrase and cophosphorylase, A.,

Adler, Erich, Günther, G., and Hellström, H., cozymase as hydrogen-carrying co-enzyme in muscle-glycolysis, A., III, 142

Adler, Erich, Günther, G., and Vestin, R., effect of manganese on the action of cozymase, adenylic acid, and cocarboxylase, A., III, 270

Albers, H., Albers, E., Schlenk, F., and Günther, G., highly purified cozymase, A., III, 31.

and Heiwinkel, H., enzymic inactivation of cozymase, A., III, 222.

Heiwinkel, H., and Schlenk, F., enzymic inactivation of codehydrogenase. II., A., III, 268.

and Hellström, H., cataphoresis of alcohol apodehydrogenase, A., III, 180.

Hellström, H., and Brandt, K., structure and absorption relationships chromosomes of the salivary glands of Drosophila virilis, A., III, 56.

and Malmberg, M., vitamins and catalysts in wheat embryos, A., III, 76. Factors which cure dermatitis and promote growth in rats, A., III, 439. Effect of administration of ascorbic acid and vitamin-P on the content of erythrocytes capable of being stained in guinea-pigs' blood, A., III, 498. Influence of diet on skin abnormalities in rats, A., III, 498.

and Schlenk, F., action of ultra-violet light on cozymase, A., III, 69. Co-

zymase, A., III, 180. Schlenk, F., and Vestin, R., adenosinediphosphoric acid from cozymase, A., III, 270.

and Vestin, R., enzymic synthesis of cocarboxylase from vitamin-B₁ and phosphate, A., III, 313.

Euler, H. von. See also Adler, Erich, Albers, H., Hellström, H., Karrer, P., Schlenk, F., and Vestin, R.

Enler, U. S. von, specific vaso-dilating and plain-muscle stimulating substances from accessory genital glands in man and certain animals (prostaglandin and vesiglandin), A., Ill, 362.

Eva, W. J., Geddes, W. F., and Frisell, B., comparison of methods of measuring flour-gassing power, B., 1119.

Evans, A. G. Sec Bawn, C. E. H.

Evans, A. W., effect of uni-univalent electrolytes on interfacial tension between n-hexane and water, A., I, 408.

Evans, B. See Henley's Telegraph Works, W. T.

Evans, B. D. F. See Wills, L.
Evans, B. S., determination of cobalt;
volumetric determination, and determination in steel, A., I, 377. Analysis of carbonate-hydroxide-cyanidc [cadmium-plating bath] mixtures, B., 453.

Evans, \hat{C} . E., whiteware research. II. Effect of vitreous whiteware grog in a vitreous whiteware body, B., 1050.

Evans, C. L., modified Bone and Wheeler

gas-analysis apparatus, B., 405.
See also Bogne, J. L.
Evans, D. J., and E.C.D., Ltd., electrolytic apparatus, (P.), B., 362.
Evans, D. P., Gordon, J. J., and Watson, H. B., ortho-effect. III. Alkaline hydrolysis of benzoic esters, A., I, 516. See also Dippy, J. F. J.

Evans, E. A., and Wakefield & Co., C. C., removal from surfaces of adherent deposits formed by oil, (P.), B., 1167.

Evans, E. A., jun. See Rittenherg, D. Evans, E. B., aniline points of hydrocarbons, B., 640.

Evans, E. C., production and utilisation of domestic coke, B., 103. Fuel conservation in British iron and steel

production, B., 1292. and Ridgion, J. M., work of Coke Research Committees of the Iron and Steel Industrial Research Council,

Evans, E. I., Szurek, S., and Kern, R., tetany of cestrus in the parathyroidectomised dog, A., III, 257. Blood chemistry of surviving parathyroidectomised dogs, A., III, 337.

Evans, E. J. See John, W. C., Marsden, C. J., and Walters, (Miss) B. P. M.

Evans, F. C. See Rogers, L. A.

Evans, Gerald, and Bowie, M. A., cardiac glycogen in diabetic animals, A., Ill, 89. Evans, Gertrude, relation between vitamins and growth and survival of goldfish in homotypically conditioned water, A., Ill, 323.

Evans, H. See Sykes, C.

Evans, H., (Mauritius), root system of sugar cane. III. Early development in Mauritius. IV. Absorption and exudation of water and mineral substances, A., Ill, 365; B., 600. Botany research, B., 479.

Evans, H. C. See Maxted, E. B.

Evans, H. L., zinc-base die-casting alloys, B., 1353.

Evans, H. M., Kohls, C. L., and Wonder, D. H., gonadotropic hormone in blood and urine of early pregnancy; normal occurrence of transient extremely high levels, A., Ill, 185.

See also Emerson, Gladys A., and Halliday, N.

Evans, J. G. See Imperial Chem. Industries. Evans, J. M. See Lazar, A.

Evans, J. T., preparation and control of [oil-well] mud fluid for pressure-drilling

conditions, B., 1003.

Evans, L. E., Gnadinger, C. B., and Corl, C. S., pyrethrum plant investigations in Colorado. III. Effect of spacing interval in the row on yield of flowers. IV. Effect of different irrigation practices on plant losses due to crown rot, B., 604.

Evans, M. G., laws of solubility, A., I, 129. and Polanyi, M., introduction of thermodynamic variables into reaction kinetics, A., I, 246.

Evans, O. B., and United Gas Improvement Co., manufacture of carburetted watergas with heavy oil, (P.), B., 14.

Evans, Percy, and Reid, A., [oil industry] drilling mud; its manufacture and testing, B., 748.

See also Black, A. G.

Evans, Philip. See Dickinson & Co., J.

Evans, P. R. See Eagles, G. H. Evans, R. B. See Robinson Bros.

Evans, R. C., dielectric constant of mixed crystals of sodium ammonium and sodium potassium tartrates, A., I, 444.

Evans, R. D., and Mugele, R. A., increased γ-ray sensitivity of tube counters and measurement of the thorium content of ordinary materials, A., I, 99.

Evans, R.E. See Woodman, H.E.Evans, R. G., operation of a Rheolaveur

coal-washing plant, B., 310.

Evans, R. H., permeability and durability of concrete, B., 243.

Evans, R. M., and Hanson, W. T., jun., reduction potential and photographic developers; effect of sulphite in developer solutions, A., I, 471. Photographic development and the latent image, A., I, 526.

Evans, R. N., and Davenport, J. E., potentiometric titration of acids in mixtures of n-butyl alcohol and water, A., I, 630. Small chemical changes in an insulating oil associated with oxidation, B., 1008.

Evans, S. F. See Cartis, W. E.

Evans, S. M., and Rubber Service Labs., furoyl-substituted mercaptobenzthiazoles [vulcanisation accelerators], (P.), B., 23.

Evans, T. See Shell Development Co. Evans, T. W., calculation of results obtainable by extraction with immiscible solvents, B., 300, 1286. Composts and fertilisers in relation to green keeping. VI. Miscellaneous fertilisers [poultry manure and sewage sludge], B., 1388.

Evans, U. R., "the Evans effect occurs on impure iron and is due to active dusts,"

A., I, 322.

and Miley, H. A., oxide films on copper and iron, A., I, 301.

See also Britton, S. C., Miley, H. A., and Thornhill, R.S.

Evans, W. E., jun., comparative effect of santonin, isoartemisin, and santoninamine on the blood-sugar of rabbits, A., Ill, 137.

Evans, W. J., and Smiles, S., covalent alkaline derivatives of di-2-hydroxy-1naphthyl sulphide and of di-2-hydroxy-1naphthylmethane, A., II, 336.

Evans, W. L. See Gehman, H.

Evans, W. M., determination of specific heat and thermal conductivity in a single experiment without thermometry, A., I, 48.

Evans, W. M., and Price, W. C., absorption spectrum of the carboxyl group in the vacuum ultra-violet, A., I, 280. See also Price, W.C.

Evans, W. V., and Field, E., electrolysis of magnesium methyl iodide in n-butyl ether, A., II, 10. Eveleth, D. F., comparison of distribution

of magnesium in blood cells and plasma of animals, A., III, 292. Evelyn, K. A., and Cipriani, A. J.,

photo-electric microcolorimeter, A., I, 151.

See also Malloy, H. T., and Venning, E.H.Even, R. See Villaret, M.

Evenhnis, N. See Backer, H. J. Evenson, O. L., Kime, J. A., and Forrest, S. S., determination of small quantities of β -naphthylamine, aniline, and o-toluidine in certain food dyes, B., 531.

Evéquoz, A., analyses of genuine cognacs, B., 77.

Everest, A. B., high-duty alloy cast iron, B., 789. "Ni-resist" in Great Britain, B., 1212. Special cast irons of interest in chemical engineering, B., 1348.

Everett, M. R., and Sheppard, F., oxidation of carbohydrates in acid solution, A., II,

275.

Evers, $F_{\cdot \cdot}$, oxidation of lubricating oils at various temperatures, B., 12.

Evers, N., detection of arachis oil in olive and almond oils, B., 462.

and Smith, Wilfred, determination of strychnine in Easton's syrup, B., 87. Determination of proteolytic activity of pancreatic preparations, B., 87.

See also Eastland, $\tilde{C}.J.$ Evers, R. See Mason, M. F

Evers, W. L. See Moran, R. C. Everse, J. W. R. See Radsma, W.

Eversole, W. G., and Doughty, E. W., slit photometer for analysis of thin sections of coloured solutions: experimental confirmation of the diffusion equation, A., I, 459.

Everson, G. J. See Daniels, A. L.

Everts, T., adherence of sprayed metal coatings of zinc, steel, and V2A steel [to steel], B., 567.

Everts, W. W. C., influence of time on extension of soft rubber under specific small loading, B., 702.

Evetzki, G. N. See Terschkevitsch, V. R. Evlanova, A. V., colorimetric determination of lead in low concentrations by means of diphenylsulphocarbazone, according to C. Fischer, using coloured glass standards, A., I, 47.

Evseev, A. D., comparator for measurement of roentgenograms, A., I, 201.

Evstropiev, K. S., diphenylmethane calorimeter, A., I, 151.

and Goralnik, A. S., G.O.I. viscometer for molten glasses and slags, B., 1204. See also Samartzev, A. G

Ewald, H., effect of quality of different proteins on oxidational level in inter-

mediate metabolism, A., III, 128.

Ewald, P. P., and Schmid, E., "optical"
and "interference" total reflexion of

X-rays. I., A., I, 16. Ewart, A. J., pigment glands of the tomato, A., III, 443.

Ewell, A. W., recent meat researches, B., 723. Ewell, R. H., temperature, pressure, and volume coefficients of the viscosity of fluids, A., I, 454. Structurally equivalent units and the classification of normal and abnormal liquids, A., I, 499. Ewell, R. H., and Eyring, H., theory of the viscosity of liquids as a function of temperature and pressure, A., I, 558.

Ewell, T. C., filter, (P.), B., 304.
Ewell, W. H., preserving fruit and vegetables, (P.), B., 85.

Ewert, M., theory of concentrated solutions. XV. F.p. of aqueous solutions of organic compounds, A., I, 356.

Ewing, D. H., and Seitz, F., electronic constitution of crystals; LiF and LiH, A., I, 15.

Ewing, D. T., and Bauer, G. T., heat of wetting of activated silica gel, A., I,

and Lamb, F. W., surface tensions, densities, free surface energies, and parachors of derivatives of benzylated phenols, A., I, 116.

Wilson, M. F., and Hibbard, R. P., spectroscopic determination of metals in small samples [of plant ash]; calcium, magnesium, potassium, manganese, iron, and phosphorus, A., III,

Ewing, F. J. See Union Oil of California. Ewing, M. E. See Larson, H. W.

Ewing, B. B. See Larson, H. F.
Ewing, S. laboratory tests of new pipe coatings, B., 793. Field tests of pipe coatings, B., 812.
Ewing, S. P. See Logan, K. H.
Ewing, W. W., vapour pressures of saturates

ated solutions, A., I, 463. and Fisher, H. M., vapour pressuretemperature relations of the binary system zinc nitrate-water, A., I, 412. Ewins, A. J. Seo May & Baker, Ltd.

Ewles, J., resolution and interpretation of luminescent spectra of solids at low temperatures, A., I, 220.

Exley, W. H., and Haddon, W., application to metal surfaces of a coating of fusible metal [lead], (P.), B., 1071.

Ey, L. F. See Scott, R. D. Eyer, B. F., apparatus for determining the moisture content of a material, (P.), B.,

Eymers, J. G., chemiluminescence, A., III,

and Bottelier, H. P., protoplasmic movement in the Avena colcoptile as related to oxygen pressure and age, A., 11I, 441.

and Schouwenburg, K. L. van, lumin-escence of bacteria. II. Oxygen consumed in the light-emitting process of Photobacterium phosphoreum. III. Further data regarding spectra connected with bioluminescence, A., III, 145, 434.

Eyrard, A. See Simonnet, H. Eyring, H., and Hirschfelder, J., theory

of the liquid state, A., I, 224.

See also Altar, W., Condon, E. U.,
Ewell, R. H., Hirschfelder, J., Kincaid, J. F., Newton, R. F., and Stearn, A. E.

Eysenbach, H. See Fischer, F. G. Eyster, E. H., structure of the a and β band systems of SiF, A., I, 441.

Ezaki, I. See Kishi, N.
Ezekiel, W. N., Taubenhaus, J. J., and
Fudge, J. F., immunity of monocotyledonous plants to Phymatotrichum rootrot, B., 1105.

Ezerova, E. A. See Achumov, E. I. Ezzard, H. S., Kontz, E. C., jun., and Tubize Chatillon Corp., dry-spinning cell, (P.), B., 334.

F.

Fabbriche Riunite Industria Gomma Torino "Walter Martiny" Industria Gomma-Spiga-Sabit-Life, and Zastrow, E., varnishing of rubber articles, (P.), B., 265

Fabelinski, I. L., intensity relations of some lines of the mercury spectrum, A.

Faber, E. R., growth-substance and seedling roots, A., III, 242.

Faber, H. A., Gray, H. F., Mahlie, W. S., Heukelekian, H., Rudolfs, W., Streeter, H. W., Whisler, B. A., and Phelps, E. B. sewage chemistry, sewage treatment, and stream pollution, B., 848.

Faber, W., and Krejci-Graf, K., geological occurrence of organic calcium compounds,

A., I, 205.

Fabian, C. F., Sachanen, A. N., and Non-Mercuric Carrot Co., carroting fur, etc., and composition therefor, (P.), B., 1333.

Fabian, F. See Abel, E. Fabian, F. W., ice-cream regulations and standards, B., 834.

and Wickerham, L. J., products of fermentation of the S and R forms of yeasts, A., III, 222, 355. Fabiani, G. See Pinoy, P. E.

Fabius, A., determination of the viscosity of [cane] molasses, B., 961.

Fabre, R., and Bazille, S., methæmo-globin containing fluorine, and its significance for determination fluorine in industrial hygiene, A., IlI,

and Tomesco, T. G., zinc periodate; analytical applications, A., I, 262.

Fabrik elektrische Apparate F. Sauter Akt.-Ges., apparatus for automatically controlling a variable characteristic such as temperature, (P.), B., 302. Apparatus for maintaining constant a physical condition, (P.), B., 636.

Fabrikant, V., absorption in the mercury discharge, A., I, 104. Discharge radiation in vapours of metals, A., I, 104. Theory of radiation of a gaseous

discharge, A., I, 487.

[with Butaeva, F.], optical investigation of discharge in metallic vapours. II. Reabsorption of light in mercury discharge, A., I, 104.

Butaeva, F., and Cirg, I., absolute concentration of excited atoms in a lowpressure mercury discharge, A., I,

Kanel, A., and Butaeva, F., optical investigation of discharge in metallic vapours. III. Influence of pressure on radiation from discharges in mercury and cadminim vapour, A., I, 158.

Fabrique de Porcelaine Langenthal Société Anonyme, kilns for ceramic material. (P.), B., 1342.

Fabriques de Produits Chimie Organique de Laire. See Delange, R. Fabris, U., determination of alcohol in

blood and tissues, A., III, 334.

Fabritziev, B., formulating rubber mixtures, B., 1377.

and Gutina, R., action of ingredients dispersed to different degrees on mechanical qualities of synthetic rubber, B., 1378.

Fabry, R. See Staveley Coal & Iron Co.

Factor & Co., M., grease paints, (P.), B.,

Färber, E., and N. V. Internat. Suiker en Alcohol Co., Internat. Sugar & Alcohol Co. "Isaco," polymerisation of monosaccharides, (P.), B., 382.

Färberei Sitterthal Akt.-Ges., textiles that are resistive against shrinking and creas-

ing, (P.), B., 233.

Fagerholm, E., spectrum of CH and CD, A., I, 164. Fahey, J. E. See Carter, R. H., and Steiner,

Fahey, J. J., determination of mercurous chloride and total mercury in mercury

ores, B., 1354. Fahir, E., structure and kinetics of dense liquids, A., I, 349.

Fahlberg-List Akt.-Ges. Chemische Fabrik, sulphonamide-aldehyde condensation products, (P.), B., 651.

Fahrenkamp, E. S. Sec Berg, R.

Fahrenwald, A. W., grinding mill, (P.), B., 98. Fain, J. M., uses of organic finishes for metals extended, B., 1087.

and Barthel, A., attaching impermeable bituminous sheets [to structures], (P.), B., 1346. and Patent & Licensing Corp., aqueous

[bituminous] dispersion, (P.), B., 113.

Fainberg, M. M., automatic control of corrosive fluids, A., I, 202. Automatic regulation of rate of flow of gases, A., I, 333. Automatic control of agressive fluids, B., 508.

Fainberg, S. J., analysis of refined lead, B., 795.

and Fligelman, L. B., determination of magnesium in presence of zinc by means of hydroxyquinoline, A., I, 327. and Tal, E. M., determination of alu-

minium in presence of iron by means of hydroxyquinoline; application of the method to slags and ores, B., 797. Fainglus, E. See Kabanov, B.

Fainschmidt, O. I. See under Feinschmidt, O.

Fainschraiber, M. S. See Pogodina, V. N. Fair, A. E. H., paper filling, B., 125.

Fair, G. M., and Moore, E. W., digestion of a sewage sludge over a wide range of temperatures, B., 734.

Fairbanks, B. W., and Mitchell, H. H., relation between calcium retention and store of calcium in the body, with particular reference to determination of calcium requirements, A., III, 262.

See also Mitchell, H. H.

Fairbrother, F., electrolytic dissociation processes. II. Friedel-Crafts reaction, A., I, 320.

See also Livingood, J.J.

Fairbrother, J. A. V., conduction phenomena in semi-conductors, A., I, 64. See also Brit. Thomson-Houston Co.

Fairclough, R. A., and Hinshelwood, C. N., functional relation between the constants of the Arrhenius equation; solvent effects in the formation of quaternary ammonium salts, A., I, 313, 470.

Fairhall, L. T., toxic dusts and fumes, B.,

Fairley, A., Linton, E. C., and Ford-Moore, A. H., toxicity of dioxan, A., III, 28. Fairley, N. H., blood-pigment: pseudo-

methæmoglobin, A., III, 194.

Fairrie, J. L., treatment of oil-bearing edible materials [for animal feed], (P.), Fairweather, D. A. W. See Imperial Chem. Industries.

Faitelowitz, A. See Bunimovitch, M.

Faivre, R. See Lefebvre, H. Faizulina, A. C. See Ptschelin, V.

Fajans, E., and Martin, H., incorporation of direct with protective insecticides and fungicides. II. Effect of spray supplements on retention and tenacity of protective deposits, B., 711.

Fajersztejn, S. See Hepner, B. Fajsulin, F. F. See Vodvishenski, G. S. Falck, J., and Langz, E., influence of adrenaline on resorption from subcutaneous tissues, A., III, 399.

Falconer, S. A. See Christmann, L. J. Fales, H. A., and Shapiro, C. S., orthobaric densities of substances as a function of

reduced temperatures, A., I, 124. Falinski, (Mlle.) M., system ZrO_2 - SO_3 - H_2O : conditions for existence of a new zirconium acid sulphate Zr(SO₄)₂,H₂SO₄,2H₂O, A.,

Falk, A. J. See Belitzer, V. A.

Falk, C. R., and Applington, S., bactericidal action of mixtures of phenol and merthiolate, A., III, 359.

Falk, R., antagonism between testicular extracts and certain hypno-anæsthetics, A., III, 41.

Falkenhagen, H., X-ray diffraction and electrolytic dissociation. I., A., I, 362. Frölich, \tilde{F} ., and Fleischer, H., influence of time on the normal Wien effect, A., I. 465.

Falkevitsch, A. S., study of silicon-chromium-copper-manganese steels at low temperatures, B., 447.

and Smirnov, B. A., properties of metals at low temperatures, B., 451.

Falkovskaia, A. A. See Stadnikov, G. L. Fallesen, G. E. See Eastman Kodak Co.

Fallon, J. T., and Banting, F. G., cellular reaction to silica, A., III, 133. Tissue reaction to sericite, A., III, 133.

Fallot, M., magnetic properties of zinc-iron alloys, A., I, 229. Magnetic properties of alloys of iron with ruthenium and osmium, A., I, 509. Magnetic properties of alloys of iron with iridium, A., I, 559.

See also Hocart, R. Fallscheer, H. O. See Bradt, W. E.

Falta, H. See Kröner, W.

Faltz, G., electrical and optical behaviour of half-conductors. XII. Inner photoelectric effect in crystalline cuprous oxide, A., I, 550.

Falus, P. See Dzsinich, A. Falvo, E. See Galamini, A. Fanderlik, M. See Čtyroký, V.

Fang, H. Y., Liu, C. L., and Sah, P. P. T., chemical composition of three varieties of Hsin Shih or arsenic stones, A., I, 484. β-Naphthothiazine (thio-β-naphthylamine) and its derivatives, A., II, 393. Nicotine content of Chinese tobaccos, B., 979.

and Sah, P. P. T., d-limonene tetrabromide as a reagent in Rast's micromethod for determination of mol. wt. of organic compounds, A., II, 128.

See also Sah, P. P. T.

Fang, S., crystal structure of sodium metaborate, NaBO2, A., I, 401.

Fankuchen, I., structure of silver uranyl acetate, A., I, 17. Condensing monochromator for X-rays, A., I, 152. See also Bawden, F. C., and Bernal, J. D.

Fannin, A. W., and Food Machinery Corp., electric [crucible] furnace, (P.), B., 360. Fano, U., anomalous diffraction gratings. II., A., I, 201. Electrical quadrupole moments of atomic nuclei, A., I, 492.

Fansteel Metallurgical Corporation. See Austin, M. M.

Fanta, J. Sec Křepelka, J. H. Fanto, E. C., Omohundro, A. L., and McKesson & Robbins, Inc., monoacetoxymercurialkylphenolsulphonic acids [bactericides], (P.), B., 730.

Fantus, B., and Dyniewicz, H. A., compound solution of tannic acid, B., 1406.

and Dyniewicz, J. M., phenolphthalein studies, A., III, 211. [Pharmacology of] phenolphthalein; urine analysis, A., ÎlI, 215.

Fanzères, A., and Morais, E., comparison of the Wassermann reaction carried out on wholo serum and on serum precipitated by hydrochloric acid, A., III, 292.

Faragher, W. F., Houdry, E. J., and Houdry Process Corp., treatment of hydrocarbons, (P.), B., 414.

Faragó, S., distribution of calcium in brain of normal and thyroparathyroidectomised rats, A., III, 75.

Farber, S. See Handovsky, H. Farcas, T., ferromagnetic moments of some

cobalt alloys, A., I, 509.

Fardon, J. Č., Norris, R. J., Loofbourow, J. R., and Ruddy, M. V., stimulating materials obtained from injured and killed cells, A., III, 216.
Farebrother, T. H., photo-electric measure-

ment of opacity and brightness [of

paper], B., 771. Fargo, J. M. See Hayward, J. W. Faria, A. See Guimares, J. R. A.

Faria, L. See Costa, O. de A. Farineau, J., attempt at photometry in the region of soft X-rays and application to study of free electrons in metals, A., I, 337. Spectrographic study of the conductivity electrons of magnesium and silicon, A., I, 337. Spectrographic study of the conductivity electrons in magnesium-aluminium alloys, A., I, 487. L emission bands of zinc, copper, nickel,

and cobalt, A., I, 541.

Faris, A. M. See Cadden, J. F.

Farish, L. R. See Dutton, W. C.

Farkas, A., rate-determining step in diffusion of hydrogen through palladium, A., I, 75. Electrolytic separation of hydrogen isotopes on a palladium cathode, A., I, 253.

and Farkas, L., mechanism of catalytic exchange reactions of heavy hydrogen, A., I, 315. Catalytic interaction of heavy hydrogen and benzene on platinum, A., I, 469. Mechanism of hydrogenation reactions and the formation of stereochemical isomers. A., I, 469.

and Melville, H. W., mercury-photosensitised exchange reactions of deuterium with ammonia, methane, and water, A., I, 193.

Farkas, B., and Farkas, L., catalytic activation of hydrogen, A., I, 624.

Farkas, L. See Farkas, A., and Farkas, B. Farmer, C. S., yellowing of paints, B., 810. Synthetic resin products [containing natural resins], (P.), B., 813.

Farmer, E. H., Ghosal, S. C., and Kon,

G. A. R., Michael reaction with acetylenic esters, A., II, 48.

Farmer, E. H., and Heuvel, F. A. van den, highly unsaturated compounds. VI. Triene acid from pomegranate seeds, A., II, 48.

See also Bacon, R. G. R., Brunner, H., and Rubber Producers Res. Assoc.

Farmer, S. N., and Kon, G. A. R., sapogenins. II. Sarsasapogenin and smilagenin, A., II, 203.
Farnham, C. N. See Bauer, F. C.
Farnham, G. S. See Ellis, O. W.

Farnham, R. B., factors associated with bud drop of sweet peas and method of control, B., 604.

See also Nightingale, G. T. Farnow, H. See Heinze, R.

Farnsworth, H. E., vacuum furnace for production of large refractory metal single crystals, A., I, 201.

Farnsworth, W. H., Montgomery, M., and

Marine Chemicals Co., magnesium products, (P.), B., 36.

See also Chesny, H. H.

Farnsworth, W. M., and Republic Steel

Corp., refractory, (P.), B., 39.

Farnsworth Television, Inc., fluorescent material [for television cathode-ray tubes], (P.), B., 56. Fluorescent screen, (P.), B., 363. Zinc tungstate particularly for use in fluorescent screens, (P.), B., 1202.

Farquharson, J., magnetism and polymerisation. II. Oxymethylene diacetates and polyoxymethylenes, A., I,

451.

Farr, C. C., and Cadigan, J. M., recovery of gold and other metals by amalgamation, (P.), B., 933.

Farr, H. V. See Shreve, R. N. Farr, L. E., micromethod for [determining] blood-urea; automatic urine collector for urea clearance in infants, A., III, 202.

and Smadel, J. E., urea clearance of rats: its technique and normal range, A., III, 174.

Farr, W. D. See Standard Oil Development Co.

Farr, W. K., colloidal reactions of cellulose membranes, A., III, 504. Structure of the cotton fibre, B., 1032.

Farr-Vulean Process Co., and Smith, C. W., cold-vulcanising agents or compositions [for rubber], (P.), B., 703.

Farrar, G. E., jun. See Sturgis, C. C. Farrar, M. D., and Flint, W. P., new materials tested against insects in stored maize, B., 1398. See also Flint, W.P., and McGovran, E.R.

Farrell, F. J., flexible compound sheet material, (P.), B., 537.

Farrell, L. See Lochhead, A. G.
Farrell, M. A., tests for coli-aërogenes in milk, B., 489. MacConkey's bile saltlactose broth and standard lactose broth compared as presumptive media for water analysis, B., 848.

Farrer, J. O., machines for tempering or moistening products, (P.), B., 632. and Koch, E. A. J., apparatus for thermal processes, (P.), B., 197.

Farrer, W. G. See Davis, C.

Farsky, H., electrically heated hardening furnaces for light metals, B., 52.

Farnqi, M.Z. See Chatterji, D.N.Fasce, E.V. See Standard Oil Development

Fash, R. H., increasing effective life of razor blades, B., 245. Effect of fuel oil on colour of refined cottonseed oil, B., 1233.

370.

Fasol, T., and Ueberbacher, E., determination of strong acids in leather, B., 592.

Fasold, G. A. See Greider, H. W.

Fasold, K. See Jnza, R.

Fassero, A. See Condo, F. E. Fassett, D. W. See Hjort, A. M. Fassin, G. See Forrest, J. W.

Fassina, L., boiler feed-water; evaporation and purification, B., 507. Evaporation of purified waters, B., 737.

Fasting, J. S., apparatus for drying sludge, cement slurry, etc., (P.), B., 556. Rotary

[cement] kilns, (P.), B., 1345.
Fastovski, V. G., and Girskaja, L. A., adsorption of neon and helium, A., I, 457.

See also Romanov, V. I. Fattinger, F., radium and mesothorium

industry, B., 236.
Faucett, P. H., testing of clear finishes, B.,

Fauchon, L., determination of antimony by formation of iodine-antimony-potassium complex, A., I, 478.

and Vignoli, L., precipitation and determination of antimony using a mixture of hypophosphorus and sulphuric acids, A., I, 478.

Faucon, L. See Bolzinger, A.

Fauconnan, L., preparation of metal catalysts. I. Active copper and its hydrogenating and dehydrogenating reactions. II. Active cobalt and its hydrogenating and dehydrogenating reactions, A., I, 192.

Faudenay, P. See Janot, M. M. Faulconer, W. B. M. See Bruun, J. H. Faull, J. H., jun. See Baxter, G. P.

Faull, R. F., and Rollefson, G. K., effect of iodine on the rate of decomposition of ethylene oxide, A., I, 469.

See also Rollefson, G. K. Fanre, M. See Machebæuf, M. A.

Fauré-Fremiet, E., thermal transformations of elastoidin, A., Ill, 253.

and Bandouy, C., solubility of collagens, A., III, 376.

and Filhol, J., dispersion temperature of an intracellular protein, ascaridin, A., I. 565.

and Woelfflin, R., transformation temperature of elastoidin, A., I, 134.

See also Champetier, G. Faus, H. T., resistance characteristics of tellurium and silver-tellurium alloys, B.,

1362. Fauser, G., manufacture of benzine and lubricants by means of catalytic hydrogenation under pressure, B., 518.

Fausse, J., and Celastic Corp., stiffening material [for fabrics, leather, etc.], (P.),

Faust, G. T., fusion relations of iron-orthoclase, with discussion of existence of an iron-orthoclase molecule in felspars, A., I, 204.

Faust, O., artificial silk production, B., 124.

Fautrez, J. See Lambert, P. Favorski, A. E., and Bone, M. D., determination of constitution of hydrocarbons of the C_nH_{2n-2} series, A., II, 269.

and Rudneva, (Mlle.) F. J., hydrogenation of isobutyroin under the conditions of alcoholic fermentation, A.,

and Temnikova, T. I., chemistry of vitamin-C; Reichstein's synthesis, A., III, 281.

Favorski, A. E., and Tichomolov, P. A., synthesis of an asymmetric aliphatic allene molecule by means of an acetylene-allene isomerisation, A., II, 5. Mutual influence of radicals on their migration. II. Dehydration of phenyltert.-hexylcarbinol, A., II, 145. and Zacharova, A. I., polymerisation of

C_nH_{2n-4} hydrocarbons with vicinal double and triple linkings, A., II, 316.

Favre, R. See Duboux, M. Fawaz, G., Lieb, H., and Zacherl, M. K., phosphatides and cerebrosides, A., III,

Fawcett, E. W. See Imperial Chem. Industries.

Fawcett, G. S., applications of colorimetry in the dyeing and allied industries, B., 897. Fawcett, H. W., centrifugal cream separators, (P.), B., 304. Centrifugal separators, (P.), B., 511, 993, 1148.

Fawkes, C. E. See Container Corp. of America.

Fay, A. C., application of the methyleneblue reduction test to ice-cream mix, B., 1400.

See also Martin, Williard H.

Fay, C. H., scattering of fast neutrons,

A., I, 438. Fay, H. B. See Stratford, H. R.

Fayerweather, B. L. See Dow Chem. Co. Fays, R. See Vautier, L. P. G.

Fazal-ud-Din, reduction of nitrates by the sun, B., 269.

See also Desai, S. V.

Fazekas, G. I., chemical changes in blood of animals in acute ammonia poisoning, A., III, 133. Changes in blood chemistry in experimental caustic poisoning, A., III, 249.

Fazikas, J. F., Campbell, E. H., jun., and Himwich, H. E., respiratory quotient of renal tissue of Houssay dogs, A.,

and Himwich, H. E., effect of zino and aluminium on hypoglycæmic action of

insulin, A., III, 75.
See also Dolowitz, D., Goldfarb, W., and Himwich, H. E.

Fazzioli, I., industrial removal of iron from aluminium sulphate solutions by means of manganous acid, B., 777.

Fea, G., bibliography of artificial transformations, A., I, 5.

Fearon, W. R., applications of the nitroferrocyanide [nitroprusside] reaction: new formula for carbamide, A., II, 403. See also Webb, D. A.

Fedeler, J. H., jun. See Raisch, W.

Fedeli, F., and Rossi, B., presence and significance of a chromotropic substance in the walls of veins, A., III, 8.

Federal Tobacco Corporation. See Loewenthal. B.

Federated Metals Corporation. See Baker, P. Federmeer, D. L. See Efremov, N. N. Federoff, B. See Demassieux, (Mme.) N. Fedoritenko, A. Sec Rueman, M.

Fedorov, A. S., density and atomic volume of aluminium-zinc alloys, A., I, 296. and Siltschenko, G. F., heat of solution and dilution of saturated aqueous solutions of certain salts, A., I, 309.

Fedorov, B. M., mesozoic bauxites of the eastern slope of the middle Urals, A., I.

Fedorov, B. P., and Avrorova, T. A., anthracene derivatives. II. Reaction of amination of sodium 9:10-dichloroanthracene-2-sulphonate, B., 1168.

Fedorov, B. P., and Spriskov, A., composition of technical xylidine mixtures, B., 1017.

Fedorov, D. A., and Ratovskaja, M. M., acid hydrolysis of cellulose acetates, B., 1320.

Soletschnik, N. J., and Kuptzova, A. M., properties of films of cellulose and its esters. I. Cellulose acctate films. II.

Films made from cellulose, B., 1320. Fedorov, F. P., and Talmud, D. L., sensitisation of photochemical decomposition of iron pentacarbonyl in nonaqueous solution, A., I, 193.

Fedorov, J. B. See Archarov, V. I. Fedorova, A. M. See Rodionov, V. M.

Fedorova, A. N. See Tscherniaev, I. I. Fedorova, N. M. See Joffe, J. S.

Fedoseev, P. See Kozlov, N. Fedotova, E. N. See Erschov, N. V. Fedotova, N. S. See Tschirkov, S. K.

Fedtschenko, and Kaschin, determination of

acid value of oils, B., 586.

Feemster, R. F., Wetterlow, L. H., and Cianciarulo, J., standardisation of typhoid and paratyphoid vaccines. I. Gates apparatus and total nitrogen determinations, A., III, 86.

Feenberg, E., saturation property of nuclear forces, A., I, 341, 595.

and Phillips, M., structure of light nuclei, A., I, 278.

and Wigner, E., structure of the nuclei between helium and oxygen, A., I, 109. See also Breit, G.

Fegina, A. See Losev, I. P. Fehder, P. See Husa, W. J.

Fehér, D., colorimetric determination of phosphate content of soils by electrophysical methods, B., 70. Regional distribution of soil algae, B., 707.

and Frank, M., dynamic cycle of nitrogen, potassium, and phosphorus in cultivated soils, B., 71.

Fehér, F., Raman spectrum of deuterium

peroxide, A., I, 496. and Klötzer, F., crystal structure of hydrogen peroxide, A., I, 603.

and Morgenstern, G., constitution of acids of the elements of group V of the periodic system, and their salts. II. Acids of arsenic, A., I, 282. See also Simon, Arthur.

Fehling, R., [coal] ash, slag, and slag deposits, B., 6.

Fehrenbach, C., paramagnetism of anhydrous cobalt chloride in the pure state, and in solution in cadmium chloride or manganous chloride, A., I, 293.

See also Foëx, G. Fehrmann, K. See Holstein & Kappert Maschinenfabr. "Phonix."

Feichtner, C. See Bamann, E.

Feigl, F., organic reagents in inorganic analysis, A., I, 43.

[with Lenzer, A., Demant, V., Frehden, O., and Anger, V.], microchemical detection of organic compounds by means of drop reactions, A., II, 476. Feil, E., determination of phenol in tars, B., 865.

Feild, A. L., and Rustless Iron & Steel Corp. of America, alloys of iron, chromium, nickel, and copper, (P.), B.,

Feinschmidt, O., adenosinetriphosphorie acid exchange in muscles of hibernating animals, A., III, 18. Formation of ammonia in the brain of hibernating animals, A., III, 129.

Feinschmidt, O., and Tscherniak, A. I., transformation of adenosinctriphosphoric acid in nucleated erythrocytes, A., III, 337. Adenosinetriphosphoric acid and its decomposition products in muscles, the functional capacity of which is lowered, A., III, 420. See also Ferdmann, D.

Feinstein, J. Y., and Hoyt, R. E., reactions to alcohol-insoluble fraction of

ragweed pollen, A., III, 418.

Feise, M., influence of method of preparation of zinc oxide (zinc-white) on its physical properties and suitability, B., 156. Feist, K., s-di-2-methyl-6-pyridylthiocarbamide, A., II, 75.

Awe, IV., and Völksen, IV., syntheses of 2-amino- and 2-chloro-3-methoxy-4ethoxybenzoic acid and attempted synthesis of 3-methoxy-4-ethoxy-o-phthalic acid, A., II, 61.

Feitknecht, W., basic salts. XVI. Constitution of solid basic salts of bivalent metals. III. Basic cobalt nitrates, A., I, 225. Colour and constitution of bivalent cobalt compounds, A., I, 392.

and Fischer, G., basic salts. XV. Chemistry and morphology of basic salts of bivalent metals. V. Basic

cobalt nitrates, A., I, 95.

Fejgina, E. I. See Krestovnikov, A. N. Feldberg, W., and Guimarais, J. A., liberation of acetylcholine by potassium, A., III, 133.

and Kellaway, C. H., circulatory and pulmonary effects of the venom of the Australian copperhead (Denisoniasuperba), A., III, 350. Liberation of histamine from the perfused lung by snake venoms, A., III, 477.

and Keogh, E. V., liberation of histamine from the perfused lung by staphylo-

coccal toxin, A., III, 477. and O'Connor, W. J., liberation of histamine from the perfused lung by peptone, A., III, 477. and Schriever, H., acetylcholine content of

cerebrospinal fluid of dogs, A., III, 135. See also Brown, G. L., and Dale, H. H. Feldenheimer, W., purification of earthy

minerals and improving their colour, (P.), B., 1053.

Felder, D. H. Sce Texas Co.

Feldkamp, R. F. See Sahyun, M.

Feldman, H. B., and Dahlstrom, W. G., f.p. of the ternary system glycerol-methanol-water, A., I, 31. See also Olson, V. R.

Feldman, I. C., synthesis of nitrogen-containing polycyclic compounds, A., II, 79. Feldman, J., biuret reaction of sarcosyldiglycine and glycylsarcosyldiglycine, A., II, 448.

Feldman, J. A., Kozlov, L. I., and Ivanov, K. N., significance of composition of nitrogen-hydrogen mixture for ammonia

synthesis, B., 33. Feldman, Maurice. See Krantz, J. C., jun. Feldman, Max, and Hunter, C. A., detection of hydrogen sulphide production by micro-organisms, A., III, 484.

Feldman, S. See Stout, L. E.

Feldmeier, H., and Cherry-Burrell Corp., plate heat exchanger, (P.), B., 630.

Feldspathic Research Corporation. See Weis, J. H.

Feldt, A. See Schering-Kahlbaum A.-G. Feldt, A. M. See Smorodincev, I. A. Felici, N. See Bloch, L.

Felix, A., and Bhatnagar, S. S., properties of the "Vi" antigen of Eberthella typhosa and its corresponding antibody, A., III,

Felix, K., protein-minimum and proteinoptimum [in nutrition], A., III, 17. and Mager, A., elupein. VIII., A., II, 475. Protamine of the rainbow trout,

A., III, 455. Compounds of clupein with prosthetic groups, A., Ill, 455. Zorn, K., and Dirr-Kaltenbach, H.,

degradation of tyrosine and related substances by liver- and kidney-pulp, A., III, 305.

Fell, E. IV., distortion of iron and molybdenum, B., 43.

Fellenberg, T. von, determination of citric acid [in wine], B., 76. Detection and determination of higher alcohols in imitation absinthe, B., 77. Determination of formic acid in fruit juices and syrups, B., 81. Determination of methyl alcohol in alcoholic liquors, B., 968. Determination of sucrose and melezitose in honey, B., 1114. Direct determination of starch, B., 1114. Testing of von Fellenberg's gravimetric method for determination of lactose and sucrose in milk chocolate, B., 1127. Gravimetric determination of sucrose in plain chocolate, B., 1127. Determination of traces of fluorine in foods, B., 1127.

Fellers, C. R., canning of crab meat, (P.), B., 84.

Miller, Joseph, and Onsdorff, T., dextrose [glucose] in the manufacture of fruit and vegetable products, B., 1126.

and Smith, E. G., composition and fermentation of citron, B., 493. and Stepat, IV., effect of shipping,

freezing, and canning on the ascorbic acid content of peas, B., 614.

See also Claque, J. A., Dunker, C. F., and Merriam, O. A.

Fellinger, K., liver affections in lead

poisoning, A., III, 351.

Fellows, E. J., calcium ereosotate. I.

Water-soluble constituents. II. Comparative in-vitro efficiency of calcium creosotate and guaiacolate and creosote as bactericidal agents. III. Elimination of volatile phenols in rabbit's urine after administration of "calcium creosotate solution" and after creosote solution, A., III, 349; B., 1267.

Fellows, H., nitrogen utilisation by Ophiobolus graminis, A., III, 144.

Fellows, R. L. See Howe, E. E.

Fells, H. A., control of gas-heated furnaces, B., 195. Bright annealing of non-ferrous metals, B., 574. Felsing, W. A. See Townley, R. W.

Felsinger, $H_{\cdot \cdot}$, investigation of barrier-type photo-cells with soft X-rays, A., I, 283.

Felt, E. P., and Bromley, S. W., effects of oil on shade trees, B., 711.

Felton, G. E., reduction of acetobromoarabinose by zinc and acetic acid, A., II, 6. Preparation of erythrose and some of its derivatives, A., II, 483.

Felton, L. D., Sutliff, W. D., and Steele, B. F., antigenic characteristics in man of certain products of the pneumococcus: comparison with vaccine, A., III, 6.

Fenger, F., and Armour & Co., liver extract,

(P.), B., 1273. Fenn, W. O., rôle of tissue spaces in the osmotic equilibrium of frog muscles in hypotonic and hypertonic solutions, A., lĬĨ, 474.

Fenn, W.O., and Goettsch, M., electrolytes in nutritional muscular dystrophy in rabbits, A., III, 423.

and Maurer, $F. W., p_{\Pi}$ of muscle, A., III,

Fenner, C. N., magmatic differentiation, A., I, 382.

Fenoglio, M., naturally occurring neutral and basic hydrates of magnesium carbonate, A., I, 205.

Fenske, M. R., conversion of alcohols into

cthers, (P.), B., 1311.

McCluer, W. B., and Pennsylvania
Petroleum Res. Corp., treatment of
mineral oils, (P.), B., 414, 1012, 1161. and Pennsylvania State College, fractionation, (P.), B., 634.

See also Lawroski, S., McCluer, W. B., Quiggle, D., Tongberg, C. O., and Varteressian, K. A.

Fenton, F., Tressler, D. K., and King, C. G., losses of vitamin-C during cooking of peas, B., 614. Fenwick, F., and Johnston, J., steels

resistant to scaling and corrosion, B., 575. Fenwicke, L. C., processes and compounds for colouring the surfaces of metal articles, (P.), B., 1071. Fenyo, C. See Boschan, G.

Feofilov, E. E. · See Kliukvin, N. A.

Ferchmin, A., and Frisch, S., importance of collisions of second kind in glow of mixtures of sodium and mercury vapours, A., I, 104.

Ferdmann, D., and Feinschmidt, O. [with Dmitrenko, M. T.], transformation of adenosinetriphosphoric acid in muscle, A., III, 128.

Feinschmidt, O., and Okun, Z. M., transformation of adenosine triphosphate in invertebrate muscle, A., III, 212.

and Okun, Z. M., formation and disappearance of adenylic acid in muscles, A., III, 17.

Ferenc, P., desulphurisation of gases, B., 405.

Ference, M., jun., Auger effect in germanium, A., I, 337.

Ferguson, A., and Coekett, A. H., specific heat of a liquid at different temperatures, A., I, 21.

Ferguson, A. L., Hitchens, R., and Van Lente, K., constancy of static liquid junction potentials in complex systems and their application to titration of weak bases, A., I, 310. Liquid junction potentials for complex systems, A., I, 619.

Ferguson, A. W. B. See Erith's Eng. Co. Ferguson, John. See Imperial Chem. Industries.

Ferguson, John (Runcorn), Ivy, A. C., and Greengard, H., response of spleen to intravenous injection of certain secretin preparations, acetylcholine, and histamine, A., III, 265.
Ferguson, J. B. See Lloyd, B. A., and

Patton, J. R.

Ferguson, J. H., analysis of coagulant activation, A., III, 249.

See also Cox, G. J. Ferguson, J. K. W., carbamino-compounds of carbon dioxide with human hæmoglobin and their rôle in transport of carbon dioxide, A., III, 335.

Ferguson, J. S. See Gen. Electric Co. Ferguson, L. C., bovine blood. I. Sedimentation rate and percentage volume of crythrocytes in normal blood, A., III, 449.

Ferguson, L. K. See Ravdin, I. S.

Ferguson, N. M., effects of individual environmental factors on chemical constituents of plants. I. Glucoside of flax, A., III, 500.

Ferguson, R. H., effect of glycerin on equilibria of hydrated soap systems,

and Procter & Gamble Co., soap cream, (P.), B., 1083. Ferguson, W. S. See Allen, L. A., and

Watson, S. J.

Fergusson, C. V. See Dornte, R. W. Ferjantschitsch, F. A., colorimetric determination of tungsten and molybdenum, A., I, 478.

Ferkinhoff, T. A., ozone solves colour, odour, and taste problem in Hobart (Ind.) plant, B., 504.

Fermi, \bar{E} ., and Amaldi, E., absorption of slow neutrons, A., I, 212. See also Amaldi, E.

Fermor, L. L., low-temperature carbonisation of Lower Gondwana Indian coals, B., 1293.

Fernandes, J. S., standardisation products of animal origin, B., 389.

Fernandez, H. B. See Guanzon, G. A. Fernandez, O., and Alfageme, C., determination of ascorbic acid in vegetables and fruits, A., III, 233.
Fernelius, W. C. See Bateman, L. A.

Fernholz, E., thermal decomposition of

a-tocopherol, A., II, 339. See also Wallis, E. S.

Ferracini, R. S., amino-acid contents of blood cells and plasma: relation to surgical operations, A., III, 111.

See also Bengolea, A.J.Ferraez, N., jun., apparatus for collecting and testing sediments of liquids, (P.), B., 1289.

Ferramola, R. See Vanossi, R.

Ferrand, M. Seo Manceau, P., and Policard, A.

Ferrannini, A., effect of gangliectomy on mineral composition of bone, A., III, 379. Glycæmic curve after intramuscular injection of insulin in diabetics, A., III, 461.

Ferrante, A. See Bassani, B.

Ferranti, Ltd., and Pirie, M. V., electrolytic condensers, (P.), B., 1075.
and Taylor, M. K., luminescent screens,

(P.), B., 583.

Ferrari, A., mixed hexachloroaurates, A., I, 350.

and Ciccoli, Z., bismuthihexanitrites, A.,

and Colla, C., solid solutions between rhombohedral neutral carbonates of bivalent metals. I., A., I, 23. Systems TlNO₂-H₂O and TlH₂PO₂-H₂O, A., I, 363. Salts of hexahydrated cations. I. Hexahydrated hypophosphites of bivalent metals. II. Magnesium chlorite hexahydrate, A., I, 502,

and Sessa, L., rate of solution of bivalent rhombohedral carbonates in acids, A., I, 623.

Ferrari, R., and Buogo, G., determination of ascorbic acid, A., III, 233. See also Crippa, G. B., and Margaria, R.

Ferrari, R. A., indicanæmia during gestation, parturition, and puerperium, A., III, 165.

of pregnancy, A., III, 15. Ferrarini, E. See De Niederhäusern, A.

and Francis, D. J., reaction for diagnosis

Ferre, A. W., and Startevant Co., B. F., drying apparatus [for timber], (P.), B., 1346.

Ferré, L. See Boutarie, A.

Ferree, C. B., forged steel roll, (P.), B., 147. Ferreira, F. I. See Peco, G.

Ferrer, J. M., jun. See Caley, E. R. Ferrero, P. See Soc. Carbochimique.

Ferretti, A., refractometric determination of purity quotient of beet juice, B., 605.

Ferretti, B., propagation and absorption of

the neutrino, A., I, 492. Ferrey, G. J. W., determination of manganese in manganese and iron citrate, B.,

Ferri, C. Sce Meyer, K. H.
Ferrich, M. See Flumiani, G.
Ferris, S. W., and Atlantic Refining Co.,
hydrocarbon oil treatment, (P.), B., 16, 1301. Treatment of hydrocarbons, (P.), B., 1301.

Ferro, R. B., improved instrument for turf sampling, B., 1384. See also Dawson, R. B.

Ferro Enamel Corporation. Sec Chester, A. E.

Ferro Engineering Co. See Lemmerman, R. G.

Ferry, C. W., and Buck, J. S., separation of primary arylamines from secondary aralkylamines, A., II, 95. See also Buck, J. S.

Ferry, J. D., and Parks, G. S., viscous properties of polyisobutylene, A., I, 294.

See also Spence, D.

Ferry, R. M., Cohn, E. J., and Newman, E. S., physical chemistry of proteins. XIII. Solvent action of sodium chloride on egg albumin in 25% ethanol at -5° , A., I, 134.

Fersman, A. E., geochemical constants of iron, A., I, 334. Mendeléev's periodic law and its application to geochemistry, A., I, 382.

Féry, A., electrical properties of thin films of platinum obtained by cathode sputtering in air and other gases (He, N2, O2, and H_2), A., I, 551. Fessenko, N. G. See Orlenko, A. F.

Fessenkov, B., eclipses of the moon, and distribution of atmospheric ozone, A., I, 430.

Fessler, C. H. H., Puchta, G. J., and Amer. Steel & Wire Co. of New Jersey, coating of metal [with varnish or lacquer], (P.), B., 581.

Fessler, J. See Joslyn, M. A. Fessler, J. H., Mrak, E. M., Cruess, W. V., and Hayes, J. J., effect of natural wines on composition of urine and alkali reserve of blood, A., III, 127.

Fester, G., Bertuzzi, F. A., and Pucci, D., gland secretion of alligators (yacarol).

II., A., III, 88.
Fetcher, E. S., jun., Lillie, R. S., and
Harkins, W. D., investigation of electrostenolysis, A., I, 359. See also Michaelis, L.

Fetter, D., and Schultz, F. W., digestion of milk and of modified milk in vitro, A., III, 382. Digestion of milk and of modified milk in vivo, A., III, 382.

Fetz, E., hardenable bronzes on a coppernickel-tin basis. VII. Temperature-stability of hardened alloys, B., 353. Copper-lead bearings from metal pow-

der, B., 1220. Feuer, H. Sco Waldstätten, E. Feuerstein, K. See Staudinger, H. Feulgen, R., Behrens, M., and Mahdihassan, S., preparation and identification of nucleic acids occurring in plant-cell nuclei, A., III, 284.

Feustel, I.C., and Byers, H.G., comparative moisture-absorbing and moisture-retaining capacities of peat and soil mixtures,

B., 163.

Fevold, H. L., Hisaw, F. L., and Greep, R. O., augmentation of gonad-stimulating action of pituitary extracts by inorganie substances, particularly copper salts, A., III, 278. Comparative action of gonad-stimulating hormones on the rat ovary, A., III, 362. See also Hisaw, F. L., and Leonard,

S.L.

Feytaud, and De Lapparent, P., use of resinous and terpenic products for the maintenance of floors and furniture, B.,

Feyto, A. See Ibarz, J.

Fialkov, J. A., action of potassium halides on mercurous nitrate, A., I, 248.

and Berenblum, L. S., hydrogen carbonate separation of beryllium oxide from

aluminium oxide, A., I, 262.
and Schargorodski, S. D., thermal decomposition of Na₂SO₄ in presence of kaolin. II., A., I, 37.

and Sigalovski, K., magnesium chloride from Lake Kujalnitzki saline, B., 34.

Fiandaca, S., functional relation between pineal body and anterior pituitary. I. Effect on ketonæmia, A., III, 152.

and Sorce, S., effect of cortical hormone on mineral metabolism, A., III, 38. See also Indovina, R.

Fiberloid Corporation. See Murdock, F. M., and Webber, C. S. Ficheroulle, H. See Douillet, A.

Fichter, F., and Holbro, T., electrolysis of Δ^{γ} and Δ^{β} -hexenoic acid, A., II, 175.

and Schetty, G., electrochemical oxidation of benzene homologues. VII. ψ -Cumene, A., II, 92. Electrochemical oxidation of 2:4-dimethylbenzonitrile, A., II, 244. Electrochemical oxidation of pinene, A., II, 508.

and Schönmann, P., electrolytic introduction of the thiocyanate group into aromatic amines and phenols, A., II,

and Sutter, P., electrolysis of mixtures of propionates with sulphates and with perchlorates, A., II, 84. See also Stenzl, H.

Ficklen, J. B., and Goolden, L. L., behaviour of certain dusts under mechanical impingement, B., 853.

Fiedler, H. See Kaufmann, H. P., and Steinkopf, W.

Field, D. J. See Hurd, C. B. Field, D. J. Sce Davies, William. Field, Edmund. See Evans, W. V.

Field, Edward. See Standard Oil Co. of California.

Field, E. W. See Swann, S., jun.

Field, J., jun., and Tainter, E. G., effect of 4:6-dinitro-o-cresol on oxidation of dand l-arabinose by previously starved yeast, A., III, 98. Effect of 2:4-dinitrophenol on oxygen consumption of the rabbit lens, A., III, 308. See also Martin, A. W.

Field, J. E., and Lindsay, G. A., index of refraction of cerussite for X-rays, A., I, 173.

See also Gehman, S. D.

Fielding, J. H., impact-resilience in testing

channel black, B., 1001.

Fieldner, A. C., Davis, J. D., Thiessen, R., Selvig, W. A., Reynolds, D. A., Jung, F. W., and Sprunk, G. C., carbonising properties and petrographic composition of Clintwood bed coal from Buchanan mines Nos. 1 and 2, Buchanan County, Va., B., 312. Carbonising properties and petrographic composition of Pittsburgh bed coal from Pittsburgh Terminal No. 9 mine, Washington County, Pa., B., 312.

Davis, J. D., Thiessen, R., Selvig, W. A. Reynolds, D. A., Sprunk, G. C., and Holmes, C. R., carbonising properties and petrographic composition of Millers Creek bed coal from Consolidation No. 155 mine, Johnson County, Ky., and effect of blending Millers Creek coal with Pocahontas bed and Pittsburgh bed (Warden mine) coals, B., 744.

See also Ellis, R. W.

Fields, J. D., treatment of lubricating oil

stock, (P.), B., 17.
Fields, R. T. See Crane, P. W.
Fiero, G. W., hydrogenated castor oil as an ointment base, B., 186.

Fierz, M., Fermi's theory of the β -dis-

integration, A., I, 214.

Fierz-David, H. E., Jadassohn, W., and Stoll, W. G., azo-dyes and immunobiology; destruction of anaphylactic supersensitiveness to azoprotcin by azo-dyes from p-aminophenylarsinic acid, A., II, 528.

Jadassohn, W., and Zürcher, W. F., azodyes and immunobiology; Schultz-Dale experiments with bis-p-succinanilic acid-azoresorcinol, A., II, 144.

and Mannhart, E., 2-methyl-a-naphthylamine-4-sulphonie acid, A., II,

Fieser, L. F., and Bradsher, C. K., Fries rearrangement of 4-benzoloxydiphenyl, A., II, 23.

and Dunn, J. T., addition of dienes to halogenated and hydroxylated naphthaquinones, A., II, 344. Application of the diene synthesis to halogenated 1:2- and 3:4-phenanthrenequinones, A., II, 345. Further reaction product from 3-chloro-1:2naphthaquinone and dimethylbutadiene, A., II, 345.

Fieser, M., and Hershberg, E. B., synthesis of phenanthrene and hydrophenanthrene derivatives. VI. 1':3'-Diketocyclopentenophenanthrenes, A.,

I1, 24.

and Hershberg, E. B., synthesis of phenanthrene and hydrophenanthrene derivatives. IV. Hydroxylated compounds, VII. I':3'-Diketo-5:9-dimethoxy-1:2-cyclopentenophenanthrene, A., II, 20, 105. Aceanthrene derivatives related to cholanthrene, A., II, 142. 10-Substituted 1:2-benzanthracene de-

rivatives, A., II, 333.
Hershberg, E. B., Long, L., jun., and Newman, M. S., hydroxy-derivatives of 3:4-benzpyrene and I:2-benzanthr-

acene, A., II, 189.

and Holmes, H. L., synthesis of phen-anthrene and hydrophenanthrene derivatives. V. Addition of dienes to cyclic aβ-unsaturated esters, A., II. 17. 5

Fieser, L. F., Jacobsen, R. P., and Price, C. C., action of bromine in methylalcoholic solution on phenanthrene; new route to 9-phenanthrol and 9phenanthrylamines, A., II, 14.

and Lothrop, W. C., diazo-coupling of 5-hydroxy-6-methylhydrindene, A., II,

and Newman, M. S., synthesis of 1:2benzanthracene derivatives related to

cholanthrene, A., II, 93.
and Seligman, A. M., preparation of methylcholanthrene, A., II, 94. 4:10-Ace-I:2-benzanthracene, A., II, 285.

See also Bruce, W. F.

Fieser, M. See Fieser, L. F. Fiessinger, N., Bénard, H., Herbain, M., Dermer, L., and Bareillier, G., effect of insulin on blood-sugar during perfusion of the liver, A., III, 230.

and Boyer, F., leucocyte phosphatases, A., III, 69.

Cattan, R., and Merklen, F. P., hyperglycæmia in dogs produced by ligature of the portal vein; effect of liverglycogen and adrenalectomy, A., III, 101.

Gajdos, A., and Panayotopoulos, E., protein equilibrium in histamine shock, A., III, 53.

Zuckerkandl, F., and De Wodzinska, conjugation of sodium chloride with serum-proteins as indicated by interference-refractometry and its relation with the albumin : globulin ratio, A., III, 339.

Fife, J. G., internal electrolysis. III. Determination of small quantities of silver in presence of various other metals and its application to analysis of galena and pyrites, A., I, 631.

and Torrance, S., determination of small quantities of copper in iron. I. Use of revolving anode. II. Determination by internal electrolysis, B., 352. Fife, J. M., and Frampton, V. L., $p_{\rm H}$

gradient extending from the phloem into the parenchyma of sugar beet and its relation to the feeding behaviour of Eutettix tenellus, B., 273.

Fifield, C. C., Smith, Glenn S., and Hayes, J. F., quality in durum wheats and method of testing small samples, B.,

Figura, V., nutritive value of acorns and their utilisation in human diets, B., 282. Figurovski, N. A., sedimentometric analysis of suspensions, A., I, 323. Hydrostatic micro-balance and its application to study of kinetics of heterogeneous reactions, A., I, 480. Simple appliance for sedimentometric analysis, A., I, 537. Oxidation of ammonia in presence of platinum, B., 339. and Pospelova, K. A., determination of

concentrations by means of a liquid interferometer, A., I, 331.

Fikri, M. M., and Ghalioungui, P., ancylo-

stoma anæmia, A., III, 255.
Filachione, E. M. See Hurd, C. D.
Filatov, V. V., electro-hydrogenation of coal under conditions of underground gasification, B., 638.

Fildes, P., tryptophan and "sporogenes vitamin" requirements of Cl. botu-linum, A., III, 145.

See also Gladstone, G. P., and Kögl, F. Files, A. F., colouring materials for food fats and oils, (P.), B., 587.

Filimonova, G. See Komarov, F. Filin, N. A. See Slavinski, M. P.

Filinger, G. A., variations in effectiveness of chemically treated codling-moth bands, B., 604. Bacterial leaf-spot of peach, B., 1390. Spray-residue problem in Kansas, B., 1390.

Filinov, A. See Dubovitzki, A. M. Filipenia, V. M., potash fertilisers for flax and hemp, B., 707.

Filipov, T. S., mechanism of action of halide ions in anode processes, A., I, 365. Filipova, V. N. See Antipov-Karataiev. I. N.

Filippenko, I. A., physiological characteristics of yarovised and non-yarovised

winter wheat, A., III, 50.

Filippenko, M. A., and Zaring, I. I., testing steels for their resistance to corrosion and erosion in contact with phosphoric acid extracts from Vyatka phosphorites, B., 1214. Testing metals for their chemical resistance to hydrofluosilicic acid, B., 1356.

Filippi, A. See Roche, J.
Filippon, S., and Bellini, L., absorption of lipins. I. Oleic acid in normal dogs. II. Oleic acid in phloridzinised dogs, A., III, 384.

See also Lombroso, U.

Filippov, A. I. See Bobko, E. V. Filippov, A. N. See Krasikov, S. E. Filippov, N. S., and Sluzkaja, M. M., interferometric analysis of heavy water, A., I, 197.

Filippova, A. G., separation of nephelito from iolite-urtito ores by centrifugal method, B., 133.

Filitti-Wurmser, S. See Wurmser, R. Filko, A. R., therapeutics of malaria, A., III, 59.

Filmer, D. F. See Lampitt, L. H.
Filomeni, M., pharmacology of gallic
acid. II. Effect of gallic acid on diuresis due to hypertonic sodium chloride solutions. III. Effect on diuresis following intravenous injection of water, A., III, 348.

Filtration Equipment Corporation. See Laughlin, W. C. Finalborgo, A. C. See Cryder, D. S.

Finbak, C., and Hassel, O., layer-line and Debye photographs by means of the characteristic X-rays of the crystal itself, A., I, 152. Rotation of anionic polyhedra in cubic crystal lattices. III. Nitrates, A., I, 225. Structure of cæsium nitrate, A., I, 401. Crystal and molecular structure of carbon tetra-iodide and tetrabromide, A., I, 502.

Crystallochemistry of nitrates of univalent cations, A., I, 603.

Finch, G. I., Beilby layer on non-metals, A., I, 69. Nature of polish, A., I, 226. Electron diffraction and surface structure, A., I, 401. Structure of thin metallic films, A., I, 550.

and Fordham, S., structure and formation of thin films studied by electron diffraction, A., I, 401.

and Williams, A. L., structure of electro-

deposited nickel, A., I, 287. and Wilman, H., surface structure of silicon carbide, A., I, 119.

Finckh Ges.m.b.H., preparation of aluminium and its alloys for electrodeposition, (P.), B., 1072.

Finclerc, L. See Millet, M. Findlay, A., use of the name "racemic acid," A., II, 367.

Filhol, J. See Fauré-Fremiet, E.

Findlay, D. H., and Sykes, E. T., control of potato blight by spraying and destruction of haulm, B., 1254.

Findley, T., jun. See Walker, A. M. Fine, I., automatic gas generator, A., I,

Finefrock, T. P., O'Neil, W. F., and Amer. Gypsum Co., accoustical or insulating plaster, (P.), B., 1345.

Fingerling, G., starch equivalent of carrots, B., 282. Starch equivalent of sugar beet, B., 494.

Hientzsch, B., Kunze, H., and Reifgerst, K., replacement of protein by urea in

rations for growing cattle, B., 1403. and Schoenemann, R., utilisation of sugars of different configuration glucose, fructose, galactose, sucrose, lactose, maltose, starch, and mannan (ivory nut)—by carnivorous animals, A., III, 19.

Fink, C. G., cobalt as a catalyst, A., I, 192. and Coler, M. A., electrolytic processes in the magnetic field, A., I, 568.

and Kolodney, M., electrodeposition of manganese using insoluble anodes, B., 146.

and Linford, H. B., effect of speed of rotation on electrode potentials of copper and zinc, A., I, 566.

and Polushkiu, E. P., microscopical study of ancient bronze and copper, B., 1353.

Pink, C. K. See Hoyt, C. S.

Fink, D. E., and Smith, L. E., toxicity of certain organic compounds to culicine mosquito larvæ, B., 624.

and Vivian, D. L., toxicity of certain azo-compounds to mosquito larvæ, B., 624.

Fink, F., and Hadáček, J., comparison of macro-methods of determining the iodine value of fats, B., 150. Sce also Hadáček, J., and Káel, K.

Fink, G. A., production and absorption of

thermal energy neutrons, A., I, 4. Dunning, J. R., Pegram, G. B., and Segré, E., production and absorption of slow neutrons in hydrogenic materials, A., I, 489.
See also Powers, P. N., and Rasetti, F.

Fink, H., isolation of the natural urine porphyrins, A., III, 341. Synthesis of yeast cell-substance, and maximal yeast crops on sugar solutions, B., 965.

[with Lechner, R.], fodder-protein production in agricultural distilleries in the four-years' plan, B., 494.

Haehn, H., and Hoerburger, W., preparation of fat by means of micro-organisms. III. Preparation of fat using Endomyces vernalis. IV. Experiments with other organisms, A., III, 432. Preparation of fat by micro-organisms, B., 1232.

Haeseler, G., and Schmidt, Matthias, fat production by micro-organisms; fat formation by strains of Oidium lactis (Oospora lactis), A., III, 181.

and Just, F., attempts to detect alkaloids in hops, B., 175. Carbonation of small quantities of beer in the labora-tory, B., 719. Hop pectin. IV. Action of various pectin preparations on beer, B., 1258.

Krebs, J., and Lechner, R., preparation of fodder yeast from wood-sugar solution; biological synthesis of protein, B., 616. [Preparation of fodder yeast from wood-sugar solution], B., 838.

Fink, H., and Kunisch, G., composition of total nitrogen of various varieties of brewing barley, its changes during ripening and germination, and its significance for protein modification. I. and II., B., 965, 1394.

See also Just, F. Fink, H. P., standard arc lines, A., I, 336. Fink, W. L., aluminium and its alloys, B.,

See also Aluminum Co. of America. Finkeldey, F. A. B., feeding of cement kilns, (P.), B., 1209.

Finkelstein, Phoenix process for recovery of silver from used [photographic] fixing baths, B., 90.

Finkelstein, D. N., analysis of aërosols; absorption and determination of zinc salts and free acid in mists, A., I,

See also Raspopov, S. I.

Finkelstein, H. See Beard, J. W. Finkelstein, J. See Cline, J. K., and

Williams, Robert R.

Finkelstein, M., poly[hydr]oxycarboxylic acids or their salts, (P.), B., 759. Finkelstein, V., and Rubanik, M., kinetics

of ammonia synthesis on technical iron catalyst, A., I, 191. and Tartakovski, I. S., determination of

 $p_{\rm H}$ with electrolytic saturation of the electrode with gas, A., I, 323. and Ustjanova, P. V., solutions of electro-

lytes showing no polarisation on electrolysis, A., I, 620.

See also Danilov, V.

Finkle, I. I. See Saunders, F. Finkle, P., metabolism of various types of sugars by S and R forms of pneumo-coccus, A., III, 275.

Finklestone-Sayliss, H., Paine, C. G., and Patrick, L. B., bacteriostatic action of p-aminobenzenesulphonamide on hæmolytic streptococci, A., III, 490.

Finlayson, A., and Pacific Car & Foundry Co., alloy steel, (P.), B., 579.

Finlayson, D. See Brit. Celanese. Finlayson, M. H., complement fixation with vaccinial elementary body suspensions and anti-vaccinial rabbit serum, A., III, 117.

Finlayson, T. C. See Woodall-Duckham (1920), Ltd. Finn, A. N. See Hahner, C.

Finn, J., jun., and Bullard Co., E. D., absorbent material [for gas masks, etc.],

(P.), B., 398.

Finn, R. F. See Mitchell, H. L.

Finnemore, H., [medicinal] iron preparations, B., 1131.

and Cooper, (Miss) J. H., cyanogenetie

glucosides in Australian plants. IV.

Zieria lævigata, A., II, 136.

Reichard, (Miss) S. K., and Large,
(Miss) D. K., cyanogenetic glucosides
in Australian plants. V. Phyllanthus
gastroemii, A., II, 136.

Finni, J. N., and Gottlieb, J. S., excessive
dottel calculus formation. A. III, 205.

dental calculus formation, A., III, 205. Finzel, T. G. See Snyder, J. E

Finzenhagen, H. Sco Schultz, J.

Fiock, E. F., and Roeder, C. H., soapbubble method of studying combustion of mixtures of CO and O₂, A., I, 86.

Fiodorov, A. F., stability of concrete marine harbour works, B., 1344.

Fiori, C., metabolism and importance of iodine in the young organism. III. Vitamins and blood-iodine, A., III, 323.

Fiorito, J. A. See Williams, R. D. Firdman, J. See Terroine, E. F.

Firestone Tire & Rubber Co. See Jones, B. A., and Park, C. R.

Firth-Sterling Steel Co. See Comstock, G. J.

Fischbach, I. See Hahn, A. Fischbeck, K., and Salzer, F., scaling of

iron and other metals, B., 574.

Fischer, A., effect of formaldehyde on heat-denaturation of proteins, A., III, 111. Nutrition of tissue cells, A., III, 209. Growth of tissue cultures in heavy water, A., III, 263.

and Herrmann, H., inhibition of fumarasc action by heparin, A., III, 481. Fischer, C. H., from soap substitutes

to aliphatic alcohol sulphonates, B., 1167.

Fischer, E., [prevention of] uneven dycing of khaki shades with indanthrene [vat] dyes, B., 896.

Fischer, E. J., tar-like residues, petroleum refinery residues, and tar-like reaction products, B., 1156.

Fischer, F., Gudden, B., and Treu, M.,
Becquerel effect in galena, A., I, 600.

Fischer, Franz, synthetic motor fuels, B., 751.

Fischer, F. G., and Eysenbach, H., biochemical hydrogenations. V. Enzymio hydrogenation of unsaturated compounds. VI. New kind of enzymic liydrogenation of fumaric acid, A., III, 219, 392.

Hultzsch, K., and Flaig, W., aldol condensations. IV. Dodecapentaenal from crotonaldehyde; dodecapenta-enol and tetradecahexadecenoic acid, A., II, 135.

and Robertson, W., biochemical hydrogenations. IV. Hydrogenation of crotyl alcohol by coli bacteria, A., II,

Fischer, F. K., determination of potassium ferrocyanide in presence of other salts, A., I, 98. Potentiometric determination of barium by means of ammonium dichromate, A., I, 327. Colorimetric determination of nitrogen in leather, B., 162. Potentiometric determination of zincin electrolytic baths B., 579.

See also Schachkeldian, A. B. Fischer, G. See Feitknecht, W.

Fischer, Georg. See Wagner, Hans. Fischer, Hans, chlorophyll, A., III, 245.

and Aschenbrenner, J., bile pigments.
XVI. Synthesis of octamethylbilirubin, A., II, 122. and Beer, L., porphyrins. XXXIX.

Formylpyrroporphyrin and formyldeuteroporphyrin, A., II, 36.

and Bub, K., chlorophyll. LXXVII. Phæoporphyrinogen a₅, phylloerythrinogen, and attempted inactivation of chlorophyll and its derivatives, A., II,

and Endermann, F., imidoporphyrins. IV. Synthesis of tetraimidoætioporphyrin, A., II, 471.

and **Heidelmann**, J., synthesis of benzoylpyrromethenes, A., II, 117.

and Herrie, K., chlorophyll. LXXI. Quantitative dehydrogenation chlorin copper salts with oxygen. LXXIX. Anhydrochlorins, rhodorhodin, and catalytic reduction of porphyrins to chlorins, A., II, 122, 391.

Fischer, Hans, and Hofmann, H. J., cleavage of azlactones by diazomethane and methyl alcohol and by alkoxides, A., II, 112. Porphyrins. XLI. Constitution of uro- and mussel-shell-porphyrin; detection of uroporphyrin III in congenital porphyrinuria, A., II, 168.

and Kahr, K., chlorophyll. LXXX. New purpurins and chlorins by the oxidative degradation of chlorophyll,

A., II, 470.

and Lambrecht, R., bacterioehlorophylla, A., III, 486.

and Lautenschlager, W., chlorophyll. LXXV. Oxidation and reduction of the formyl group of chlorophyll-b, A.,

II, I69.

and Lautsch, W., chlorophyll. LXXVI. Dihydroxychlorins and dihydroxyphorbides. LXXVII. Partial synthesis of methylphwophorbide-a and -b, A., II, 215.

and Leopoldi, G., determination of small amounts of cadmium with "dithiz-

one," A., I, 632.

and Müller, A., pentduopent reaction. I., A., II, 167. Imidoporphyrins. III. Complex salts of imidoporphyrins, A., II, 169. Porphyrins. XLII. Synthesis of a tetramethylporphintetraacetic acid; constitution of uroporphyrin, A., II, 169.

and Strobel, E., pyrromethenes and tripyrrylmethanes with bromovinyl

groups, A., II, 470.

and Zischler, H., porphyrins. XL. Synthesis of 1:3:5:7-tetramethylporphin-2:4:6:8-tetrasuccinic acid, A., II, 122.

See also Goldstein, H., and Metzger, W. Fischer, Hellmut, progress in technical electrolysis, B., 936. Testing of anodically produced oxide films (Eloxal films) [on aluminium], B., 1223.

and Leopoldi, G., detection and determination of zinc by means of diphenyl-

thiocarbazone, A., I, 97.

Fischer, Herbert, determining the fineness of fibres by the weighing method, B., 423. Continuous process of manufacturing alkali-cellulose, B., 534.

Fischer, Hermann, glyoxal semiacetals, (P.), B., 118.

Fischer, H. O. L., and Baer, E., synthesis of the biological l(-)-glyceryl-a-phosphoric acid, A., II, 396. Synthetic optically active glycerides, A., II, 397. Baer, E., and Nidecker, H., glyoxal. IV.

dl-Tartronaldehydic acid, A., II, 441.

Baer, E., Pollock, H., and Nidecker,
H., syntheses of simpler methylated

sugars, A., II, 443.

d Dangschat, G., configuration of shikimic acid, and its degradation to glucodesonie acid, A., II, 382.

See also Erlenmeyer, H.

Fischer, M., and Knorr, C. A., hydrogenation of acetylene and ethylene with palladium as catalyst, A., I, 524.

Fischer, Maric, action of hæmoglobin on ascorbic acid; state of combination of ascorbic acid in erythrocytes, A., III, 370. Oxidation of ascorbic acid by peroxidase systems; action of hæmoglobin derivatives, A., III, 440. See also Berend, N.

Fischer, M. H., and Suer, W. J., baseprotein-acid compounds, A., III, 56.

Fischer, M. N., and Kviat, E. I., potentiometric analysis of micelle formation, A., I, 311.

Fischer, Odon, chemical nature of so-called syphilis antigens. I. Elimination of an inactive fraction, A., III, 373.

Fischer, Ottmar. See Schwarz, G.

Fischer, P. Z., and Barabanov, V. F., overvoltage of hydrogen at amalgam [surfaces], A., I, 311.

Fischer, R., behaviour of glucosides when micro-sublimed, A., II, 486.

and Ehrlich, H., detection of alanto-lactone in Enula root, A., III, 244. Detection of baptisin in Baptisia root, A., III, 246.

Fischer, R. P., hydrothermal copper-bearing veins of the N.E. Colorado plateau, A., I, 102.

Fischer, S., determination of adulteration of lubricating oils by means of identifiers, B., 871.

Fischer, V., equilibrium isotherms and isobars of binary mixtures above the critical points of their constituents, A., I, 406. Recovery of hydrogen from coke-oven gas, B., 863. Separation of methane-ethane-propane mixture, B., 875.

Fischer, W., Brünger, K., and Grieneisen, H., metallic scandium, A., I, 254. Dietz, W., and Jübermann, O., separation

of the rare earths, A., I, 421.

Fischer, W. F. See Ruzicka, L. Fischer, W. H. See Miescher, K., and Ruzicka, L.

Fischkova, C. E. See Pletenev, S. A.

Fischl, A. See Fischl, E. Fischl, E., and Fischl, A., extremely thin film of cellulose ester, etc., (P.), B., 1323.

Fischler, F., prophylaxy of goitre as a nutritional problem; validity of iodine-deficiency theory of the origin of endemic goitre, A., III, 13.

See also Bleyer, B. Fischman, R. J. See Neimark, M. E. Fischnich, C., root production, A., III, 330.

Sec also Laibach, F. Fishenden, M., radiation from non-luminous combustion gases, B., 105. Solution of the domestic smoke problem, B., 624.

Fisher, A. See Brassert & Co., H. A. Fisher, Alfred. See Universal Oil Products Co.

Fisher, A. G. T. See Eagles, G. H.

Fisher, A. M., and Scott, D. A., spermine, zinc, and insulin, A., III, 438.

Fisher, C., site of formation of the posterior lobe hormones, A., III, 401.

See also Ingram, W. R.

Fisher, C. H., and Eisner, A., extraction methods for determining tar acids and bases, and variables affecting their accuracy, B., 640. Determination of tar acids and bases by extraction methods, B., 747. Primary liquefaction of coal by hydrogenation; chemical nature and effectiveness of the vehicle, B., 1001. Graphic analysis of hydrocarbon oils, B., 1006.

Fisher, D. J., and Stevens, E. II., building nuclear crystal structure models, A., I,

Fisher, E. A., and Halton, P., test baking. I. Technique and some factors affecting fermentation. II. Determination and significance of loaf volume, B., 832.

Halton, P., and Carter, R. H. C., storage of wheaten flour. I. Influence of storage on chemical composition and baking quality of flour, B., 608. See also Halton, P.

Fisher, H. F., and Petroleum Rectifying Co. of California, [oil-emulsion] de-hydrator with preliminary treatment, (P.), B., 19.

See also Union Oil Co. of California. Fisher, H. L., and U.S. Rubber Co., tacky rubber compositions, (P.), B.,

Fisher, H. M. See Ewing, W. W. Fisher, H. R., factors affecting the basic

cake formula, B., 387. Fisher, J. H. See Pyle, J. J.

Fisher, M. H. See Aitkin, T. R. Fisher, M. S., and Shaw, Z., mechanism of

nitride-hardening [of steels], B., 1060. Fisher, (Miss) N. I., and Hamer, (Miss) F. M., azacyanines, A., II, 354. Seo also Kodak, Ltd.

Fisher, P., electrochemical researches on sulphur derivatives of silver, A., I, 32.

Fisher, R. A., sign of the magnetic moment of the ³⁹K nucleus, A., I, 385. Sec also Carpenter, B.

Fisher, R. B., Krohn, P. L., and Zuckerman, S., occurrence of an æstrogenie substance in the sexual skin of monkeys, A., III, 74.

and Wilhelmi, A. E., metabolism of creatine. I. Micro-determination of creatine and creatinine. II. Conversion of arginine into creatine in the isolated rabbit heart, A., III, 344.

Fisher, R. E., Russell, J. A., and Cori, C. F., glycogen disappearance and carbohydrate oxidation in hypophysectomised

rats, A., III, 39.
Fisher, W. E. See Eastman Kodak Co.
Fisher, W. R., hardening of metal, (P.), B., 689.

Fisher Scientific Co. Sce Matuszak, M. P. Fishman, J. B. Sce White, Abraham. Fishwick, V. C., brewers' grains as pig food, B., 725. Brewers' grains as a substitute for millers' offals [for pig feeding], B., 1129.

Fisk, J. B., cross-sections of Cl₂ and N₂ for slow electrons, A., I, 106.

and Morse, P. M., elastic scattering of neutrons by protons, A., I, 107. Schiff, L. I., and Shockley, W., binding of neutrons and protons, A., I, 60.

See also Morse, P. M.

Fiske, A. H., Bryan, C. S., and Rumford Chem. Works, tetraphosphates, (P.), B., 342. Thiotetraphosphates, (P.), B., 543.

Fiskina, R. See Berlin, L. E. Fitch, C. P. See Donham, C. R., and Palmer, \hat{L} . S. Fitch, I. C. See Metropolitan-Vickers

Electrical Co.

Fitch, W. H., tubular recuperators applied to continuous reheating furnaces, B., 1141.

Fitchburg Paper Co. See Uong, D. D. Fite, A. B., fertilisers for early cabbage,

B., 72. Fitger, A. K., Dumble, C. R., and String

Detector Co., detection and separation of fibrous vegetable matter from animal fibres, (P.), B., 1190.

Fitting, H., chemical properties of the hormone of Mimosa pudica, A., III, 246. Physiology of protoplasmic streaming in leaves of Vallisneria spiralis, A., III, 328. Hormones as physiological stimulants, A., III, 399.
Fitz, W., continuous distillation of tar in

tube stills, B., 747.

Fitzgerald, F. S., and Kon, G. A. R., structure of glutaconic acids and esters. IX. a-Methyl- and a-ethyl-glutaconic acids, A., II, 273.

Fitzgerald, G. A. See Dunker, C. F.

Fitzgerald, L. E., pitch and pitch troubles in paper-making, B., 27. Fitzgerald, M. E. See Harned, H. S.

Fitzgerald, P. E., increasing oil- and gaswell production by acidising; development of methods and equipment, B., 748. Fitzgibbon, M., volumetric determination

of mercury [in organic compounds], A., II, 476.

Fitzhugh, O. G., effects of cortico-adrenal

extract on growth and sexual activities, A., III, 400. Fix, E. L., and Pittsburgh Plate Glass Co.,

safety glass, (P.), B., 1342.

Fjord-Nielsen, I., diphtheria antitoxins from toxins prepared with Pope and Llewellyn-Smith's medium, A., III, 6.

Flachs, A., working-up [Rumanian] oil residues by means of selective solvents, B., 206.

Flaig, W. See Fischer, F. G.

Flammer, H. See Lottermoser, A. Flanigan, G. E. See Bender, R. C., and Supplee, G. C.

Flaschengas-Geräte Ges.m.b.H., receptacle for liquefied gas. (P.), B., 512.

Flaschenträger, B., and Bernhard, K., furan-2:5-dicarboxylic acid in urine, A., III, 170.

Flaschka, H. See Pestemer, M.

Flatt, R., uranometric determination of fluoride, A., I, 631.

Flaum, G. Sec Ralli, E. P., and Stueck, G. H.

Fleck, E. E., and Palkin, S., catalytic preparation of a-pyroabietic acid, A., II, 158. Catalytic isomerisation of the acids of pine oleo-resin and rosin, A., II, 462.

See also Du Pont de Nemours & Co., E. I. Fleck, H. R., precipitation of metals by means of 8-hydroxyquinoline (oxine). II. Effect of $p_{\rm H}$ on the precipitation of cadmium, tungsten, and uranium from acetate solutions, A., I, 376.

Fleck, J., ternary system: water-potassium

chloride-potassium chlorate, A., I, 243. Fleener, C. J., circulation of vacuum pans [and results with the Webre circulator], B., 988.

Fleer, A. W., and White, Alfred H., catalytic reactions of carbon with steam-

oxygen mixtures, B., 8.

Flegler, E., and Raether, H., collision ionisation processes in gases investigated with the cloud chamber, A., I, 3. Investigation of electrical discharges in gases with the cloud chamber, A., I, 54.

Fleiger, A. G. See Piper, J. D. Fleisch, A., Sibul, I., and Kaelin, M., acetylcholine in blood, A., III, 451.

Fleischer, G. See Butenandt, A. Fleischer, H. See Falkenhagen, H.

Fleischer, J., and Gen. Motors Corp., absorbent working fluids [for refrigeration], (P.), B., 302.

Fleischer, M., relation between chemical composition and physical properties in

the garnet group, A., I, 482.

Fleischer, N. A., and Osokoreva, N. A., sodium and potassium ferrocyanides from black cyanide, B., 903. Sodium ferrocyanide from the cyanide melt obtained by nitrogen fixation with sodium carbonate, B., 903.

Fleischer, N. A., and Osokoreva, N. A., salt equilibria in aqueous solutions of sodium ferroeyanide, chloride, carbonate, and sulphate at 25°, B., 903. Solubility in the system sodium ferrocyanide-sodium chloride-water at 80°, B., 903.

and Plaksina, E. F., solubilities in system potassium ferrocyanide-potassium carbonate-potassium sulphate-water at

25°, B., 903.

Fleischer, R., and Pietsch, H., selective photo-effect in oxide cathodes with embedded metal atoms, A., I, 600.

Fleischhacker, H., and Seyfried, H., stool urobilinogen determinations in disturbed colouring-matter balance, A., III, 121.

Fleisehhauer, R. See Brand, K.

Fleischman, P., and Schumacher, effervescent sodium perborate, (P.), B.,

Fleischmann, A. See Löbering, J. Fleischmann, E., inside and outside protec-

tion of steel pipes, B., 566. Fleischmann, F. See Reiss, M. Fleischmann, M. See Bonte, F. R.

Fleischmann, R., relation between effective cross-sections for slow neutrons, A., I, 389. Resonance levels of the two ⁸⁰Br isomerides, A., I, 593.

Fleischmann, IV., effect of phloridzin [on tissue respiration], A., III, 420.

and Kann, S., relation between thyroid hormone and vitamin-A, A., III, 322. Inhibition by phenol derivatives of the autoxidation of vitamin-A; thyroxinevitamin-A antagonism, A., III, 439.

Fleisher, W. L., bread cooling and treating, (P.), B., 390. Treatment of hygroscopic materials at subatmospheric pressures,

(P.), B., 1147.

Fleming, A. H., motor fuels, (P.), B., 412. Fleming, E. P., and Amer. Smelting & Refining Co., roasting sulphide ores, (P.), B., 53.

Fleming, G. H. Sec Marker, R. E. Fleming, H. See Blanc, E. C.

Fleming, J. S. B. See Imperial Chem. Industries.

Fleming, R., and Stotz, E., alcoholism. Alcohol content of blood and spinal fluid following oral administration in chronic alcoholism and psychoses, A., Ill, 112.

Fleming, R. S. Sec Thompson, E. C.Fleming, W. E., preventing injury from Japanese and Asiatic beetle larvæ to turf in parks, etc., B., 171.

Baker, F. E., and Koblitsky, L., insecticidal action of acid lead arsenate on larvæ of Japanese beetle in different types of soil, B., 378.

and Metzger, F. W., control of Japanese beetle on fruit and shade trees, B., 274. Control of Japanese beetle and its grub

in home yards, B., 274.

Flemming, C. F., and Roth Rubber Co., sponge rubber, (P.), B., 67.

Flenner, A. L. See Du Pont de Nemours & Co., E. I.

Fletcher, C. C. Sec Merz, A. R.

Fletcher, C. J. M., effect of helium on kinetics of thermal decomposition of

acetaldehyde, A., I, 86. and Rollefson, G. K., presence of free radicals in thermal decomposition of diethyl ether, A., I, 36. Free radicals from ethylene oxide and catalysis of other reactions by them, A., I, 36. Fletcher, C. L. Sec Eastman Kodak Co.

Fletcher, J., and Plastergon Wall Board Co., [metallic] coated article [with vinyl resins], (P.), B., 948.

Fletcher, \hat{J} . \hat{P} ., and Waters, E. T., free sugar concentration of livers of rats absorbing glucose and fructose, in relation to glycogen synthesis, A., III, 421.

Fletcher & Co., Ltd., G., and Murray, C. W., vacuum pans, (P.), B., 1148.

Flett, L. H. Sec Nat. Aniline & Chem. Co. Fleurent, E., some determining factors in the nutritive quality of wheat bread, B., 1398.

Fleury, G., and Jourdin, P., determination of nitrogen in SD powders by Devarda's method, B., 1279.

Fleury, P., and Boisson, (Mlle.) S., action of periodic acid on lactic and pyruvic acid, A., II, 273.

and Caron-Claeysen, determination of organic acids in urine by Hehner's method, A., III, 459.

and Courtois, Jean, vegetable pyrophosphatases. I. Kinetics of hydrolysis of pyrophosphoric and β -glycerophosphoric acids, A., III, 143.

Flexatex, Ltd. See Rodwell, A. G.

Flexner, J. See Bruger, M. Flexser, L. A. See Rothberg, P. Fleysher, M. H. See Nat. Aniline & Chem.

Flickinger, E. See Freudenberg, K. Fliederbaum, J., and Tiscowitz, R., influence of vitamins on water-affinity of blood. I. Ascorbic acid, A., III, 77.

Fligelman, L. B. See Fainberg, S. J. Flint, C. F., and Naunton, W. J. S., physical testing of [rubber] latex films, B., 702.

Flint, E. E., and Butuzov, V. P., cameras for X-ray photography at low temperatures, A., I, 330.

Flint, E. P., and Wells, L. S., system limeboric oxide-silica, A., I, 137.

Flint, F. C., decolorising of glass, B., 136. See also Schrero, M.

Flint, G. W. See Standard Oil Co.

Flint, L. H., and McAlister, E. D., wavelengths of radiation in visible spectrum promoting germination of light-sensitive lettuce seed, A., III, 365.

Flint, W. P., freeing dairy plant from insect pests, B., 833.

Chandler, S. C., and Farrar, M. D., oil dusts for peach insects, B., 1390. See also Farrar, M. D.

Flock, E. V., and Bollman, J. L., blood fats during the dietary production of fatty livers in dogs, A., III, 412.

Floe, C. F., extraction of copper from roasted concentrates by sulphuric acid baking, B., 567.

and Hayward, C. R., differential production of soluble sulphates from mixtures of metallic oxides, B., 34.

Flohil, J. T., effect of chemical flour improvers on proteolytic action in relation to gas-retaining capacity of fermenting doughs, B., 386.

Flood, A. Sco Schmidt-Nielsen, Sigval. Flood, C. A., Gutman, E. B., and Gutman,

A. B., phosphatase activity, inorganic phosphorus, and calcium of serum in disease of liver and biliary tract, A., III, 301.

See also Mullins, C. R.

Flood, E. D., Hannum, J. A., and Flood, Co., coating composition [wood filler], (P.), B., 64.

Flood Co. See Flood, E. D.

Flor, H. H., flax seed-treatment tests, B., 1103.

Florence, G., and Vincent, D., effect of post mortem autolysis on activity of hepatic arginase, A., III, 481.

See also Drilhon, A.

Florentin, D., application of Goutal's formula to determination of calorific value of anthracites and semi-cokes, B., 404. Composition and purity of milk in the Paris region, B., 833. Determination of caffeine in coffee and caffeinefree coffee, B., 837.

Florentino, N. Sec Sassi, A. V.

Floresco, N., effect of electric field of an argon tube on beer yeast, A., III, 222. Effect of mercury vapour on beer yeast, A., III, 222

Florey, H. W., hormone controlling Brunner's glands, A., III, 493.

Floriani, L., pharmacognosy of Trixis divaricata, Spreng, var. discolor Griseb., A., III, 137. Bark of Aspidosperma quirandy, Hassler, A., III, 331.

Florida Humus Co. See Golding, W. B.

Florio, R. See Darraspen, E.
Florkin, M., protein content of bloodplasma of insects, A., III, 53. Reducing and fermentable substances in body-fluids of Arenicola, Dasybranchus and Sipunculus, A., III, 53. True plasma-sugar of a selachian (Scyllium canicula, L.), A., III, 84. Uric acid in blood of insects, A., III, 84. Content of true sugar in plasma of insects, A., III, 84. Plasma-sugar of decapods, A., III, 165. Micro-photometric determination of amino-acids [in blood], A., III, 336. Submicro-photometric method for determining uric acid in blood-plasma, A., III, 336. Fermentable reducing substances (true bloodsugar) of the internal fluid of inverte-brates, A., III, 372. Composition of blood-plasma in adult insects, A., III, Composition of blood-plasma during metamorphosis of the silkworm, A., III, 451.

and Gomez, $J_{\cdot,\cdot}$ micro-determination of total protein, albumin, and globulin of [blood-]scrum or -plasma, A., III, 336.

and Houet, R., high urea content of the red blood corpuscles of Sipunculus, A., III, 449.

See also Fourmarier, P., jun.

Florova, T. I. See Orlov, N. N. Flory, P. J., vinyl polymerisations, A., I, 190. Kinetics of condensation polymerisation; reaction of ethylene glycol with succinic acid, A., I, 249. Heat of combustion and structure of cuprene, A., I, 413.

Flosdorf, E. W., and Chambers, L. A., effects of intense sound vibrations on ovalbumin, A., III, 21.

Flotow, E., determination of alcohol by Widmark's method, A., II, 359.

Flour Mills of America, Inc. See Heald, W. L.

Flower, W. B., [casting] of earthenware, (P.), B., 39.

Flowers, L. C., throwing power and current distribution in plating baths, B., 578.
Floyd, W. F., and Keele, C. A., skin potentials in human subjects, A., III, 387.

Flue, C. F., extraction of copper from roasted concentrates by sulphuric acid baking, B., 540.

Flügge, S., mass defects of the lightest atomic nuclei, A., I, 341.

and Kreb, A., nuclear physics, A., I, 59.

Flüshöh, R. See Dawihl, W. Fluhmann, C. F., and Hoffmann, P. E., œstrogenic substances in treatment of pelvic inflammatory disease, A., III, 461. Flumiani, G., and Ferrich, M., gravimetric determination of aluminium, A., I, 98.

Flunkert, P. See Herzog, A.

Flury, F., and Wirth, W., methyl alcohol and toxic methyl compounds, A., III, 391. Fly, C. L., organic iron and p_H as factors affecting reproduction of Lemna major, A., III, 158.

Flynn, D. G. See Birch, H. F.

Flynn, E. D., and Oliver United Filters, treatment of sewage, (P.), B., 94.

Foa, P., effect of solar irradiation of pregnant rats on the calcium, phosphorus, and phosphatase contents of the fœtus, A., III, 176.

Fock, V., neutrino theory of light, A., I, Bose amplitudes in the 60, 341. neutrino theory of light, A., I, 441.

Focke, A. B., improvement of speculum gratings by application of aluminium,

Ä., I, ǯ31. Fodiman, E. B., and Kargin, V. A., colloids obtained by condensation of vapours. II. Organosols of metals of the first and second groups, A., I, 27. Change in e-potential in coagulation of arsenious sulphide and silver sols by electrolytes, A., I, 361.

Fodor, A., and Lichtenstein, N., anhydrolytic decomposition of edestin and enzymic cleavage of the products, A., III, 141. Degradation of ovalbumin by heating with β -naphthol; chemistry and enzymic behaviour of the degradation products, A., III, 416.

Fodor, G., electric condensers, (P.), B.,

Fölsch, H., preparation of ferrocerium or of pyrophoric metal, B., 921.

Fölsche, T., determination of mechanical moment of the easium nucleus from the inverse Zeeman effect of the hyperfine structure, A., I, 272.

Föppl, O., damping capacity of metals, especially steels, B., 45.

Förster, F., measurement of heat and electrical conductivity [of metals], B., 299. Determination of the elasticity modulus and the damping of metals, B., 1218.

and Holste, A., biological action of sound of high pitch, A., III, 132.

and Köster, W., dependence of modulus of elasticity and damping of transversely vibrating metal rods on the amplitude, A., I, 402. Modulus of elasticity and damping in relation to the state of a metal, B., 1218.

and Scheil, E., time of formation of martensite needles, A., I, 455.

Förster, G., Skrabal, R., and Wagner, J., Raman effect. LXIX. V. Ultraviolet absorption of esocyclic ketones, A., I, 345.

and Wagner, J., substitution and absorption band displacement. IX. Halogeno-anilines and -nitrobenzenes, A., I, 280.

Förster, M. See Klein, W. Förster, T., valency angles and binding strength of the carbon atom, A., I, 398. Influence of a double linking on the firmness of nearby single linkings, A., I, 500.

Förster, T., and Jungers, J. C., ultra-violet absorption spectra of the molecules CH₃·NH₂, CD₃·NH₂, CH₃·ND₂, and CD₃·ND₂, A., I, 217. Ultra-violet absorption spectra of deutero-substituted methylamines, A., I, 547.
Försterling, K. See Strack, E.
Foex, E., new trials on take-all of wheat

during 1934-5, B., 821.

Foëx, G., and Fehrenbach, C., calculation of magnetic moment of ions, A., I, 19. Foëx, M. A., action of hydrogen on alkaline

glasses at high temperature, B., 138. Fogelson, E. I., and Kalmikova, N. V., potentiometric determination of molybdenum in steel, B., 447. Determination of arsenic in ferrous and non-ferrous metals by means of calcium hypophosphite, B., 451. Electro-titration of acidity of coloured petroleum products, B., 640. Electrometric determination of vanadium and of small amounts of chromium in steel, B., 681.

Fogg, A. See Jakeman, C. Fogg, H. C. See Willard, H. H. Foglia, V. G., Gerschman, R., Marenzi, A. D., Munoz, J. M., and Rietti, C. T., aggravation of pancreatic diabetes by anterior pituitary extract, A., III, 490.

See also Houssay, B.A. Foglino, N. See Prever, V.

Fokina, E. A. See Neuman, R. S. Foley, E. F., Keeton, R. W., Kendrick, A. B., and Darling, D., alterations in serum-proteins as index of liver failure,

A., III, 59. Foley, G. See Rosebury, T. Foley, G. E. See Coffey, J. M.

Folgner, H. A., silver alloys as brazing materials for spuds [pipe flanges] in tank construction, B., 571.

Folgner, R., stabilisers for hydrogen peroxide in wool bleaching, B., 1038.

Folkers, K., and Major, R. T., isolation of crythroidine, an alkaloid of curare action, from Erythrina americana, Mill, A., II, 434.

Folkins, H. O. See Steacie, E. W. R.

Follensby, E. M. See Hooker, S. B. Follett-Smith, R. R., and Williams, J. E., Demerara index, B., 1114. See also Williams, C. H. B.

Folley, S. J., effect of estrogenic hormones on lactation and on phosphatase of blood and milk of the lactating cow, A., III, 74.

and Kon, S. K., effect of progesterone on lactation in the rat, A., III, 360.

and White, Paul, response of the pigeon erop gland to prolactin: inhibition of œstradiol monobenzoate, A., III,

Folliet, A., Sainderichin, N., and Follsain Synd., protection of iron and steel, (P.), B., 455.

Follsain Syndicate, Ltd., and Sainderichin, N., case-hardening steel, (P.), B., 1225.

See also Folliet, A. Folsom, T. R., lead or other low-melting metals for X-ray targets, A., I, 49.

Fomin, S. V., physico-chemical processes in nervous tissue. III. Ascorbic acid content of the marmot brain during

hibernation, A., III, 44. and Gutnitzkaja, P. M., carbohydrate metabolism of the nervous system. I. Autolytic formation of acetaldehyde from monosaccharides by brain tissue, A., III, 130.

Fomin, S. V., and Makarova, P. T., antiscorbutic activity of tomatoes submitted to manufacturing processes, A., III, 45.

and Strashesko, D. N., physico-chemical processes in nervous tissue. II. Electrical conductivity, viscosity, and

 $p_{\rm H}$, A., III, 7. Fomin, V., and Houtermans, F. G., radioactivity in tantalum on neutron bombardment, A., I, 109.

Houtermans, F. G., Leipunski, A. I., and Schubnikov, L. V., slowing down of neutrons in liquid hydrogen, A., I, 108.

Fomitscheva, T. L. See Adadurov, I. E. Fonda, G. R., fluorescence of rhodamine, A., I. 283.

Fondrilux, Société Anonyme, cast iron, (P.), B., 357.

Fonrobert. E., crystallisation of resins, B., 1084.

Font, J. M., grinding mechanism of mills for granular materials, (P.), B., 3. Fontaine, M., flavin content of different

organs of the eel, A., III, 296. and Busnel, R. G., distribution and

nature of flavin contained in the skin of the eel, A., III, 341.

and Gurevitsch, A., flavin content of eggs and embryos of Selachii during development, A., III, 18.

Fontès, G., comparative permeability to alcohol of the intact and the living skinned frog, A., III, 132. Comparative permeability towards alcohol of the isolated skin of the frog and collodion membranes, A., III, 132. Partial permeability to alcohol of the isolated skin of the frog, A., III, 348.

Kunlin, J., and Thivolle, L., iron metabolism and hæmatopoiesis in the dog after total-gastrectomy, A., III, 213.

and Lindenberg, $A_{\cdot \cdot}$, ratio $Q_a:Q_a$ and the Nicloux coefficient K for acetone with Carassius auratus, A., III, 306.

and Thivolle, L., maximum renewal of blood-hemoglobin, A., III, 12. Treatment of severe iron deficiency and hæmorrhagic anæmia; restoration of iron reserves, A., III, 204.

Fonteyne, R., Raman effect in absolute perchloric acid, A., I, 10.

Food & Fruit Industries, Inc. See Grab, E. G.

Food Machinery Corporation. See Fannin, A. W., Harvey, R. B., Sharma, J. N., and Thompson, A. R.

Foohey, W. L. See Du Pont de Nemours & Co., E. I.

Foord, S. G. See Norrish, R. G. W. Foot, E. B. See Modell, W.

Foote, A. B., reduction of free-milling gold ores and the Pinder stamp, B., 796.

Foote, H. W., and Hickey, F. C., ternary systems barium hydroxide and water with barium chloride, thiocyanate, chlorate, or acetate at 25°, A., I, 308. and Vance, J. E., comparison of methods

for determination of copper, B., 682. Foote, P. D., how physics is applied in the oil industry, B., 203. [Physical changes in lubricating oil], B., 518.

Forbes, A. L., jun., and Byrne, C. O., [oil-gas] separating tower, (P.), B., 646. Forbes, E. B., effects of deficiency of phosphorus on utilisation of food energy and protein, A., III, 471. See also Kahlenberg, O. J.

Forbes, E. C., and Beamish, F. E., surface effects of platinum metals on silver assay beads, B., 1066.

Forbes, G. S., and Nelson, A. F., photoiodination of the butenes, propylene, and ethylene at low temperatures; preparation and photolysis of αβ-diiodobutane, A., I, 318.

Forbes, J. C., and McConnel, J. S., crystallisation of liver fraction protecting against necrosis from carbon tetrachloride or chloroform administration, A., III, 295.

Neale, R. C., and Scherer, J. H., liver preparation protecting against necrosis from chloroform or carbon tetra-chloride administration, A., III, 64.

Forbes, L. J. B. See Pilkington Bros. Forbes, W. H., blood-sugar and glucose tolerance at high altitudes, A., III, 165. See also Dill, D. B.

Forbrich, L. R. See MacPherson, D. R. Ford, E. G., and Wallis, E. S., molecular rearrangements in the sterols. II. Constitution of the isomeric ethers of chole-

sterol, A., II, 416. Ford, J. B. See Gen. Electric Co. Ford, J. G. See Westinghouse Elec. &

Manufg. Co.
Ford, J. H., standardisation of Peet-

Grady results [with control insecticide], B., 846.

Ford, T. F. See McBain, J. W. Ford-Moore, A. H. See Fairley, A.

Ford Motor Co., Ltd., casting and apparatus

therefor, (P.), B., 455. Renshaw, E. S., and Burns, J. N. foundry core and moulding sand, (P.),

See also McCarroll, R. H.

Forder, H. C., dyeing casein buttons, B., 1084.

Fordham, S., and Tyson, J. T., structure of semi-permeable membranes of inorganic salts, A., I, 236. See also Finch, G. I.

Fordyce, C. R., Salo, M., and Clarke, G. R., cellulose mixed-ester lacquers, B., 63. See also Eastman Kodak Co.

Fore, D., jun. Sec Bost, R. W.

Foresti, B., electromotive behaviour of nickel in presence of hydrogen, A., I, 519. Catalytic hydrogenation of cyclohexanone, A., II, 502.

and Chiummo, (Signa.) C., influence of the activity of hydrogen ions on the velocity of hydrogenation of ketones in a liquid medium in presence of platinised Rancy nickel or of platinum-black poisoned with thiophen, A., I, 571.

Foresti, C. See Lanfranchi, A. Forestier, H., and Graff, (Mlle.) M., reduction of boric anhydride by manganese,

A., I, 41.

and Lille, R., variation of catalytic power of ferromagnetic substances at the Curie point, A., I, 192. Variation in catalytic activity of ferromagnetic oxides at the Curie point, A., I, 369.

and Redslob, F., decomposition of cadmium ferrite, A., I, 94.

Foret, (Mlle.) J., synthesis under pressure of hydrated calcium silicates, A., I, 320. Action of soda in solution on hydrated tetracalcium aluminate, A., I, 371.

Forker, H., differences in biological activity of the individual ursols, B., 30.

Forman, J., diminishing tube damage when removing scale by hydrochloric acid, B.,

Forman, J. R. H. See Baird Television. Formaseri, M. See Ponzio, G.

Formica Insulation Co. See Cochrane, J. D., jun.

Fornachon, J. C. M., bacterium causing "disease" in fortified wines, B., 76.

Forner, G., changes in adiabatic heat content of steam for small pressure differences, B., 95.

Fornet, A., and Ihlow, F., measurement of baking quality of wheats, B., 609.

Fornét, R., preparation and application [in perfumery] of esters of anisyl alcohol, B.,

Forney, G. J. See Dodson, R. W. Forney, W. E. See Kaplan, W.

Forrer, R., intensity of orbital interaction in metals, A., I, 71. Intensity of orbital interaction in salts; ion factor, A., I, 116. Numerical factor in discontinuous law of Curie points and m.p., A., I, 231. Types of carrier electrons in super-conduction, A., I, 292. Electronic lattice of the transition elements, A., I, 398. Intensity of orbital interaction in crystals, A., I, 500. Orbital intensity of interaction in combinations of multiple ionisation, A., I, 505. Extension of conception of electronic lattice to crystals of mono-ionised salts, A., I, 603.

Forrest, C. N., and Barber Asphalt Co., paving mixture, (P.), B., 42. Forrest, H. O. See Standard Oil Co.,

and Standard Oil Development Co.

Forrest, J. See I. G. Farbenind. Forrest, J. W., Fassin, G., and Bausch & Lomb Optical Co., colour comparator, (P.), B., 997.

Forrest, L. A. See Lowry, M. W. Forrest, S. S. Seo Evenson, C. L. Forrester, G. C., treatment of [organic] gaseous media, (P.), B., 876.

Forró, M., diurnal variation of cosmic-ray showers, A., I, 277. See also Barnóthy, J.

Forsans, P. E. H., seals for coke-oven doors, (P.), B., 1307.

Forsbeck, F. C., and Hollon, H. C., standards for determining suitability of bile specimens for detection or release of typhoid carriers, A., III, 202.

Forsberg, E. A., and De Laval Separator Co., centrifugal machine, (P.), B.,

Forsch, B. N., geochemical composition of ocean and continental water (from Baikal), A., I, 51. Field of thermal

water, A., I, 101.
Forshaw, J. E., Kearns, H. G. H., and Martin, H., control of lichen on apple trees by tar oil washes, B., 1106.

Forster, H. See Möhler, H.

Forster, M. G. See Cleghorn, R. A. Forster, R. See Bernhauer, K. Forsyth, R. P., "direct" reduction of

titaniferous iron ores, B., 557. Forsythe, W. E., temperature measure-

ments with disappearing-filament optical pyrometer, B., 95.

Fort, M. See Associated Dyers & Cleaners. Fortescue, C. L. Seo D'Ombrain, G. L.

Forti, C., insulin hypoglycemia. I. Action of sulphur. II. Hyperinsulinæmia in pigeons, A., III, 186.

Fortier, A., determination of viscosity of gases and Sutherland's constant, A., I, 22,

Fortier, F. R., and Campbell, F. G., clarification of sugar-cane juices, (P.), B.,

Fortunatov, N. S., and Michailovskaja, V. I., potential measurements, with exclusion of diffusion factor in formation of alloys, A., I, 520.

and Miroschnitschenko, K. S., oxidation of molten pig iron by pure oxygen, B.,

1059.

Fortunatova, K. R. See Arnoldi, L. V. Forziati, A. F. See Bent, H. E.

Fosberg, H. A., metal-processing apparatus, (P.), B., 1073.

Fosbinder, R. J., and Malthie Chem. Co., medicament for treatment of burns, (P.), B., 1274.

Foschini, A., qualitative tests for acids in presence of thiosulphates, A., I, 424. Fosdick, L. S. See Hansen, Harold L.,

and Zaus, E. A. Foshag, W. F., carminite and associated minerals from Mapimi, Mexico, A., I, 431.

Fossati, F. N. See Standard Oil Co. of California.

Fosse, R., and De Larambergue, R., synthesis of cyanamide by oxidation of glucose and ammonia, A., II, 329.

Foster, A. C., and Tatman, E. C., influence of soil moisture and fertilisers on the specific conductivity of tomato plant sap, A., III, 284. Environmental conditions influencing the development of tomato pockets or puffs, A., III, 367.

Foster, B. W. See Imperial Chem. Indus-

Foster, G. E. See Buttle, G. A. H. Foster, J. S., and Horton, C. A., quantitative spectrographic analysis of biological material. II., A., III, 448. See also Rabinovitsch, I. M.

Foster, J. IV., materials for [petroleum] refinery pumps and compressors, B.,

See also Waksman, S. A.

Foster, L. P. See Vobach, A. C.

Foster, L. S., and Gruntfest, I. J., demonstration experiments using universal indicators, A., I, 430.

Foster, (Miss) M. D., chemical character of the ground waters of the South Atlantic Coastal Plain, A., I, 636.

Foster, S. O., treatment of secondary anæmia, A., III, 122.

Foster, IV., changing of gas fuel improves Columbia tool steels, B., 678.

Foster Wheeler Corporation. See Dean, D. K., and Frisch, M.

Foster Wheeler, Ltd., fractional distillation, (P.), B., 401.

Fostiropol, C., and Verona, R., preparation of petroleum residues in powder form, B., 314.

See also Verona, R.

Foter, M. J., and Rahn, O., growth and fermentation of bacteria near their minimum temperature, A., III, 275.

Fothergill, \hat{R} . E. See Du Pont de Nemours & Co., E. I. Fotiev, S. A., utilisation of sulphite [cellu-

lose] lyes, B., 1036.
Fousssier, M., tendency of butter to brown when rapidly heated, B., 834. Effect of preservatives on natural properties of butter, B., 834. Effect of the atmosphere [bacterial content] on dairying, B., 970.

Fouche, G. See Palazzo, F. C. Foulds, L. See Andrewes, C. H.

Foulds, R. P. See Tootal Broadhurst Lee

Foulger, F. Sce Bruckmann, K.

Foulger, J. H., toxic organic vapours and gases, B., 190.

Foulke, T. E., and Gen. Electric Vapor Lamp Co., electric gaseous discharge device, (P.), B., 1075. Conditioning of air, (P.), B., 1140.

Foulon, A., acid pumps for fat and oil industry, B., 462. Improved oil media [for paints], B., 810. Modern [paint] vehicles and zinc-white, B., 810. Removal of oils and fats from industrial textiles, B., 1040. New processes for preparing oils for use in paints, B., 1079.

Fouretier, G., precipitation of tricalcium phosphate and hydroxyapatite, A., I,

See also Jolibois, P.

Fourie, P. J., and Rimington, C., living animal cases of congenital porphyrinuria, A., III, 341.

Fourmarier, P., jun., and Florkin, M., peroxidases. I. Photo-electric comparator for the study of colour development as a function of the time, A., III, 480.

Fourment, P., and Roques, H., histological staining process with colouring matter of Sambucus ebulus, L., A., III, 108. Identification and differentiation of ephedrine and ψ -cphedrine, A., II, 478.

Fourneau, E., Matti, J., and Dunant, Y., amino-alcohols derived from penta-

erythritol, A., II, 327.

Tréfouël, J., Nitti, F., Bovet, D., and Tréfouël, (Mme.) J., antistreptococcal action of organic sulphides, A., III, 359. Chemotherapy of pneumococcal infection by di-(p-acetamidophenyl)-sulphone (1399F), A., III, 397.

Fournes, E., and Diamant-Eerde, H., photographic developers, (P.), B., 501.

Fournier, A. See Auger, P.

Fournier, G., geometrical theory of matter, A., I, 60. Upper limit of atomic numbers, A., I, 106.

Gondet, H., and Mathieu, M., semiinstantaneous X-ray patterns; rotating anticathode X-ray tube, A., I, 378. Fournier, J., and Bach, D., absorption of

organic acids by fungi, A., III, 484. Fourt, L., and Perley, A. M., quantitative spreading of fibrinogen in unimole-

cular films, A., I, 77. and Schmitt, F. O., unimolecular films of nerve-preteins, A., III, 56.

Fouts, E. L. See Weaver, E. Fouts, P. J., Lepkovsky, S., Helmer, O. M.,

and Jukes, T. H., treatment of human pellagra with the "filtrate factor," A., ÎII, 156.

Fowkes, F. M., Myers, R. J., and Harkins, W. D., ultramicroscopical examination of mixed films, A., I, 235.

Fowler, A., spectroscope and the atom, A., I, 104. Spectroscopy in industry, B., 628.

Fowler, A. A., and Otis, R. M., refractory

material, (P.), B., 673.

Fowler, A. B. See Merris, S.

Fowler, A. F., plasma-chlorides in pneumonia, A., III, 15.

See also Rabinovitsch, I. M. Fowler, A. P., the "sucro-blane" process [of refining raw sugars], B., 1392.

and Kopfler, F. W., changes in the quality of raw sugars occurring during storage, B., 1113.

Fowler, D. E., examination of rubber latex and latex compounds. II. Chemical testing methods, B., 591.

Fowler, J. T., and Jeffrey Manufg. Co., reducing machines, (P.), B., 631.

Fowler, M. G., Barker, L. M., and Phelps Dodge Corp., treatment of steel, (P.),

Fowler, O. S., mouth-treating composition, (P.), B., 94. Dentifrice, (P.), B., 626*. Fowler, R., codling moth control experiments, Blackwood, 1934—5, B., 827.

Fowler, R. D. See Smith, A. E.

Fowler, R. H., tentative statistical theory of Maclcod's equation for surface tension, and the parachor, A., I, 399. and Rushbrooke, G. S., statistical theory of perfect solutions, A., I,

and Smithells, C. J., theoretical formula for solubility of hydrogen in metals,

513.

Fowler, T. V., jun. See Gen. Electric Co. Fowler, W. A., and Lauritsen, C. C., radioactive a-particles from Li + H, A., I, 438.

See also Bonner, T. W., Crane, H. R.,

and Delsasso, L. A.

Fowler, W. C., occurrence of chrysiasis following treatment by gold salts, A., III, 22.

Fowler, IV. M., and Barer, A. P., retention and utilisation of orally administered iron, A., III, 262.

Barer, A. P., and Spielhagen, G. F. retention and utilisation of small amounts of orally administered iron, A., III, 307.

See also Barer, A. P. Fowler, W. R. T. See De Lisle, F. A. Fox, A. H., and Inventions Holding Corp., ignition element for self-lighting cigarettes, etc., (P.), B., 733.

Fox, A.L.See Dn Pont de Nemours & Co., $E.\ I.$

Fox, A. S. See Bender, C. B.

Fox, D. L., carotenoids and other lipoidsoluble pigments in the sea and in deep marine mud, A., I, 430.

and Craig, R., enzymic reactions in heavy water. II. Deuterium hydrolysis of starch, A., III, 67.

See also Young, R. T. Fox, F. W., and Stone, W., specificity of indophenol in determination of ascorbic acid in fermented products, A., III, 406.

Fox, G. W., and Bachman, C. H., line intensity variations in the hydrogen high-frequency glow discharge, A., I,

Fox, H. M., rates of cleavage of sea-urchin eggs in different latitudes, A., III, 21. ad Wingfield, C. A., rate of tissue metabolism of marine cold-blooded animals in different latitudes, A., III, 258.

Wingfield, C. A., and Simmonds, B. G., oxygen consumption of mayfly nymphs in relation to available oxygen, A., III, 59.

Fox, J. C., finishing of die castings, B., 684.

Fox, J. G., and Herzberg, G., new band system of the C₂ molecule, A., I, 595.

Fox, J. J., recent work on analytical problems, A., I, 323.

and Martin, A. E., infra-red bands in tho 3 μ region, A., I, 218.

See also Robertson, (Sir) R. Fox, M., rigid support for heated filaments, A., I, 428.

See also Schoenheimer, R., and Urey, H. C.

Foxwell, G. E., behaviour of sulphur [in coal] during carbonisation, B., 199. Chemical activation of coke, B., 514. Silica brick and salt attack, B., 782. Slagging of refractories, B., 1206.

Foy, J. R. Sec Stekol, J. A.
Foz, O. R., photometric determination of the intensity of X-rays diffracted by sodium chloride, A., I, 171.

See also Palacios, J. Fraas, F., and Ralston, O. C., beneficiation of spodumene by decrepitation, B., 436. Fraenkel, E. M., carcinogenic agent and

organic disposition in actiology of tumours, A., III, 12.

and Mawson, C. A., adsorption and elution of the Rous sarcoma agent, A., III, 123. Nature of causative agent of the Rous fowl sarcoma, A., III, 205.

Fraenkel, L., female sex hormones, A., III,

Fraenkel-Conrat, H. See Bergmann, M.,

and Todd, A. R.
Fragen, N. See Partridge, E. P., and
Storch, H. H.

Fragoso, F. N. S. See Messina, S. C. Frahm, H. See Wolf, K. L.

Frame, J. W., excitation of a lithium atom by collision with a slow a-particle, A., I, 212.

Frampton, V. L., and Gortner, R. A., electrokinetics. XVIII. Interfacial energy and molecular structure of organic compounds. IV. Electro-kinetic behaviour of charcoals in aqueous solutions of organic acids, A., I, 459.

See also Fife, J. M.

Francaviglia, A., and De Ritis, F., vitamin-C and blood. I. Action of blood on ascorbic acid, A., III, 326.

France, A., separators and washing apparatus for coal and other minerals, (P.),

France, H., Maitland, P., and Tucker, S. H., condensation of fluorene with acetone. II., A., II, 503.

See also Pickett, L. W.

France, R. L. See Syrocki, A. V.

France, W. G. See Wells, J. E. Frauchetti, P. See Padovani, C.

Franchetti, S., calculation of penetration of electrons of a few million volts. I., A., I, 591.

Francioli, M., choline-phosphatase and choline-esterase, A., III, 429. Lecithinase A and B, A., III, 429.
Francis, A. W., and Socony-Vacuum Oil

Co., hydration of olefines [propylene], (P.), B., 1170.

See also Davis, H. S.

Francis, D. J. See Ferrari, R. A.
Francis, E. L., wire-drawing process.
VIII. Effect of speed of drawing on influence of ageing on tensile properties of steel wires. IX. Does the phenomenon known as the "Alkins effect" occur in certain ferrous alloys? B., 561.

Francis, E. M. See Bradfield, A. E. Francis, F., Collins, F. J. E., and Piper, S. H., the n-fatty acids and their deriv-

atives, A., I, 289.

King, A. M., and Willis, J. A. V., long chain carbon compounds; n-tetratriacontanoic and n-hexatetracontanoic acids and their derivatives, A., II, 320.

Francis, M., determination of the activity of radioactive substances by the method of "thin layers"; (effect of thickness of substance), A., I, 329. Francis, T., jun., and Magill, T. P., direct isolation of human influenza virus in tissue culture medium and on egg membrane, A., III, 318.

Francis, W. L., surface membranes of

muscle fibres, A., III, 198.

Franck, H. H., Bredig, M. A., and Frank, R., calcium alkali phosphates. I. Rhenania phosphate, A., I, 92.

Bredig, M. A., and Hoffmann, G. [with Füldner, A.], calcium carbide. I. New crystalline phase of calcium carbide, A., I, 320.

Bredig, M. A., and Kou, K. H., calcium carbide. II. Preparation of pure calcium carbide and the discovery of a third crystalline phase of calcium carbide, A., I, 320.

Franck, J., fundamentals of photosynthesis, A., III, 443.

and Herzfeld, K. F., photochemistry of polyatomic molecules, A., I, 194. Attempted theory of photosynthesis, A., I, 319.

Franck, R., chromatographic adscrption analysis in pharmacy. III. Qualitative investigation of drugs and drug preparations, B., 618.

See also Merz, K. W. Franco, M. R. See Gugliamelli, L. François, F., and Delwaulle, (Mile.) M. L., oxidation of nickel hydroxide by sodium persulphate in an alkaline medium, A., I, 322. Isothermal decomposition of the peroxides of nickel, A., I, 528.

François, M., and Seguin, (Mlle.) L., determination of bismuth in quinine

iodobismuthate, B., 618.

François Cementation Co., Ltd., preservation of cement, mortar, and concrete, (P.), B., 41.

Frank, A., volume changes in Portlandcement concrete with alternate waterand air-curing, B., 555.

Frank, A. (Stuttgart), distribution of potassium in growing plants. Response of cultivated plants to light intensity and potassium supply, A., III, 47.

Frank, A. (Wurzburg), and Clusius, K., entropy of methane, A., I, 505.

See also Clusius, K. Frank, D. See Briner, E.

Frank, F. C., high dielectric constants, A., I, 284.

and Sutton, L. E., possible explanation of some anomalous dipole moments, A., I, 498.

Frank, G. See Smith, G. Frederick. Frank, H. See Youmans, J. B.

Frank, I., and Tamm, I. E., coherent visible radiation of fast electrons passing through matter, A., I, 220.

Frank, J. See Marder, M.

Frank, K., Dietz, K., Privinsky, F., Thiel, E., and Pen-Chlor, Inc., acidproof selfhardening [resinous] composition, (P.), B., 263.

Frank, M. See Feher, D., and Manninger, G. A., jun.

Frank, N. H., Hartree and Hartree-Fock methods, A., I, 278. Frank, R. See Franck, H. H.

Frank, R. H. See Gregg, A. W. Frank, R. T., Goldberger, M. A., and Salmon, U. J., estrogenic substances in blood and urine after castration and the menopause, A., III, 40.

and Klempner, E., the comb of the baby chick as a test for the male sex hormones, A., III, 438.

Frank, R. T. See also Salmon, U. J.

Frank, W. See Wegler, R.

Franke, A., and Kroupa, A., cyclic ethers from glycols, A., II, 44.

Franke, H. M., physiology of plant viruses, A., III, 489.

Franke, K., determination of porphyrin [in urine] with the Leifo photometer, A., III, 298.

Franke, K. W., Burris, R., and Hutton, R. S., colorimetric procedure adapted to selenium determination, A., I, 44.

and Moxon, A. L., minimum fatal doses of sclenium, tellurium, arsenic, and vanadium, A., III, 66. Toxicity of orally ingested arsenic, selenium, tellurium, vanadium, and molybdenum, A., III, 427.

and Painter, E. P., effect of sulphur additions on seleniferous soils, B., 702.

and Potter, V. R., effect of seleniumcontaining food-stuffs on growth and reproduction of rats of various ages, A., III, 218

and Tully, W. C., toxicant occurring naturally in samples of plant food-stuffs. VII. Low hatchability due to deformities in chicks produced from eggs obtained from chickens of known history, B., 725. Franke, M. Seo Slatineanu, A.

Franke, N. W. See Montgomery, C. W. Franke, W., and Katz, H., paramagnetism in the system sodium-mercury, A., I,

and Lorenz, F., glucose oxidase. I., A., III, 480.

and Schumacher, H. J., bromination of acetylene in light, A., I, 91.

Frankel, M., behaviour of peptides in aqueous solutions, A., I, 240. Biological splitting of conjugated bile acids, A., III, 32.

and Katchalsky, A., interaction of aamino-acids and peptides with sugars in aqueous solution, A., II, 402.

Maimin, R., and Shapiro, B., enzymic properties of natural papain, A., III, 140. Hydrolytic properties of Carica papaya latex and latex preparations, A., III, 504.

Frankforter, C. J., Mapes, D. W., and Frankforter Oil Process, effecting [organic] chemical reactions, (P.), B., 416.

Frankforter Oil Process, Inc. See Frankforter, C. J. Frankfurt, B. See Haller, R.

Frankl, E. See Erdey-Gruz, T. Franklin, M. C., nutritional and biochemical

effects of a low-calcium diet on sheep. I. Nutritional. II. Biochemical. Analyses of bones, A., III, 213.

Franklin, R. G. See Allen, A. J.

Frankowski, R., conversion of chlorides into nitrates by means of nitric acid, B., 540.

Franks, R., chromium steels of high nitrogen content, B., 791. See also Becket, F.M., Electro Metallurg.

Co., and Union Carbide & Carbon Corp.

Franseen, C. C. See Simmons, C. C. Franssen, H., economy in nickel by nickel plating, B., 1221.

Franta, J., ascorbic acid in aqueous

humour, A., III, 496.

Franta, W., Lavine, I., and Harrington,
L. C., development of Dakota lignite. XII. Preparation and purification of phenol-formaldehyde resins from primary-tar distillate, B., 1370.

Frantz, G., repairing steam boilers by welding, B., 1352.

Frantz, \bar{S} . G., magnetic separation, (P.), B., 1075.

Frantzevitsch, I. N., and Laschko, N. F., influence of temperature on resistance to plastic deformation of metals. I. and II., B., 1067.

Frantzuz, E. See Rapoport, I. B. Franz, Eberhard. See Hüttig, G. F.

Franz, Ehrhart, recent textile problems, B., 890.

See also Hardtmann, M., and Staudinger, H.

Franz, W., shape of Compton lines. II., A., I, 436.

Franzke, C. J., and Hume, A. N., [eradication of] field bindweed, B., 822

Fraps, G. S., and Carlyle, E. C., locoine, poisonous principle of the loco weed,

Astragalus earlei, A., III, 309.
Copeland, O. C., Treichler, R., and
Kemmerer, A. R., utilisation of vit-

amin-A by dairy cows, B., 837. and Fudge, J. F., base-exchange properties of typical Texas soils, B., 70. Relation of occurrence of cotton root rot to chemical composition of soils, B., 73. Effect of sulphur and sulphuric acid on the development of soil acidity at different depths, B.,

and Marrs, C. D., factors which may affect the hardness of cottonseed cake, B., 838.

and Sterges, A. J., availability of nitrous

nitrogen to plants, B., 70.

Treichler, R., and Kemmerer, A. R., relation of the carotene content of certain feed materials to their vit-

amin-A potency, B., 390. See also Couch, J. R., Sherwood, R. M., and Treichler, R.

Frary, F. C., use of aluminium in chemical industry, B., 576.

See also Aluminum Co. of America. Frasch, H., sodium carbonate salts, (P.), B., 1046.

Fraser, A., assaying [the gold content of] cyanide solutions, B., 1069.

Fraser, F. J., McLearn, F. H., Russell, L. S., Warren, P. S., and Wickenden, R. T. D., geology of southern Saskatchewan, A., I, 206.

Fraser, G. H., screen separator, (P.), B., 4. Pulverisers, etc., (P.), B., 992. Pulveriser and other devices, (P.), B., 1146. Air and other separators, (P.), B., 1290. Separator, (P.), B., 1290.

Fraser, H. J., and Dreyer, R. M., mutual interference in microchemical determination of ore minerals, A., I, 634.

Fraser, J. See Hawley, E. E.
Fraser, J. W., asphaltic paving composition, (P.), B., 350.
Fraser, L. H. D. See Gillespie, L. J.

Fraser, L. S. See Mansfield, T. J. G.

Fraser, O. B. J., nickel as a catalyst, A., I, 316.

Fraser, R. G. J., and Hughes, J. V., evaluation of molecular dipole moments from data of electrical Stern-Gerlach experiments, A., I, 11.

and Jewitt, T. N., ionisation potentials of free radicals, A., I, 64. Ionisation potentials of free radicals methyl and ethyl, A., I, 444.

See also Imperial Chem. Industries. Fraser, W. M., apparatus for distilling petroleum, etc., (P.), B., 414. Frattini, B., occurrence of folliculin in the male organism, A., III, 185.

Fran, F., action of strontium chloride on renal excretion of water and sodium chloride, A., III, 63.

Fraunhofer, H. von, and Omnichrome Corp., photographic film of monopack type adapted for colour photography, (P.), B., 293.

Frazer, A. C., and Stewart, H. C., ultramicroscopic particles in normal human blood, A., III, 450.

Frazer, J. C. W., oxidising catalysts [for carbon monoxide], (P.), B., 343. and Trout, W. E., jun., reactions of

nickel carbonyl with oxides of nitrogen, A., I, 43.

See also Goodloe, P.

Frazier, C. N. See Mu, J. W. Frazier, L. E. See Schlossberg, J. B.

Frazier, W. C., Long, H. F., and Johnson, W. T., jun., bacteriology of Swiss cheese. V. Use of S. thermophilus in ripening milk for Swiss cheese, B., 1124.

Frear, D. E. H., and Worthley, H. N., application of [fruit] sprays to expanding plant surfaces, B., 959.

Freckmann, W., and Baumann, H., water economy of soils and its examination, B., 476.

Fred, E. B. See Tatum, E. L., and Wilson, P. W.

Fredenhagen, H. See Bonhoeffer, K. F. Fredenhagen, K., theory of binary solutions, A., I, 126. Osmotic pressure and gas pressure, A., I, 409.

Frederick, D. S., acrylic resins, B., 1237. Frederick, R. C., Hartridge reversion spectroscope for examination of blood for carbon monoxide; improvements in design, assembly, and technique, A., III, 289.

Frederick Post Co. Sec Hiriman, W. M. Fredericks, G. E., and Leeds & Northrup Co., thermal conductivity cell, (P.), B.,

Fredericq, H., antagonism between acetylcholine and amyl nitrite in the action on the heart, A., III, 64.

Frederiksen, E. See Jensen, K. A. Frederiksen, T., growing of potatoes [in Denmark], B., 957.

Fredga, A., aa-disulphodipropionic acid, A., II, 86. Stereoisomeric forms of methylenedi-a-thiopropionic acid, A., II, 176. Selenium-substituted amino-acids. II. Optically active forms of scleno-cystine. III. Inactive sclenocystine, A., II, 235, 281. Active racemate from aa'-dithio- and aa'-diseleno-dipropionic acid, A., II, 322.

Fredlund, E., heat conduction in rarefied gases, A., I, 176. Radiometer effect at

low pressures, A., I, 506.

Free, A. H., and Bing, F. C., availability of iron in wheat, A., III, 175.

Free, G., lead as desulphurising agent for mineral oils, B., 203. Selective solvent refining [of mineral oils], B., 640.

See also Winter, H.

Free, G. R., comparison of soil moisture under continuous maize and bluegrass sod, B., 709.

See also Musgrave, G. W.

Freed, E. F., and Compania Salitrera Anglo Chilena, treatment of nitratebearing material, (P.), B., 908.

Freed, M. L., properties and uses of mullite refractories, B., 550.

Freed, S., and Haenisch, E. L., absorption spectra of samarium tungstate and molybdate at low temperatures, A.,

and Mesirow, R. J., absorption spectra of salts of ytterbium in crystals and solutions compared with those of cerium, A., I, 110.

Freed, S. C., gonadotropic substance in blood of normal humans, A., III, 73. Gonadotropic substance in urine of normal children, A., Ill, 74.

and Soskin, S., evaluation of potency of œstrogenie substances, A., III, 229.

Freedericksz, V., and Michailov, G., behaviour of an anisotropic liquid in steady and alternating electric fields, A., I, 11.

Freedman, L., and Winthrop Chem. Co., stable sodium formaldehydesulphoxalate, (P.), B., 877.

Freeman, G. G. See Cruickshank, J. C. Freeman, H., flash-roasting of pyrites concentrates in sulphite pulp manufacture, B., 905.

and Nichols Eng. & Res. Corp. of Canada, ferric oxide and sulphur dioxide from iron sulphide ores, (P.), B., 238. Flash-roasting [of pyrites], (P.), B., 238. and Skelton, C. H., removal of dirt from

papermaking stock, B., 427.

Freeman, H. F. See Peterson, W. J.

Freeman, M. Sec Burnet, F. M.

Freeman, N. H., extraction of volatile hydrocarbons from solid or high b. p. liquid hydrocarbons, (P.), B., 1013.

Freeman, R. B., relative wear of some hard metals, B., 927. Freeman, R. S., and Reed, E. B., beverage,

(P.), B., 1130.

Freeman, Samuel, tempering electric heater shells made of phenol-formaldehyde condensation product, (P.), B., 470.

Freeman, Smith, and Ivy, A. C., effect of the pancreas on the scrum-phosphatase of dogs, A., III, 387.

Freestone, J. T. See Walker, Ltd., W. & F. Freeth, F., use of sodium silicate as sizing agent and improver in papermaking, B., 770.

Frehden, O. See Feigl, F., and Wasicky, R. Frei, P. See Karrer, P.

Freiberger, M. See Josephson, E. M.

Freid, B. I. See Alimarin, I. P.
Freidlin, L. C., and Bulanova, T. F., thermal decomposition of lead formate and of formic acid at a lead surface, A., I, 628.

and Lebedeva, A. I., thermal transformations of potassium and sodium formate in presence of alkali hydroxides, A., I, 523.

See also Balandin, A. A.

Freidlina, R. C., Nesmejanov, A. N., and Tokareva, F. A., reaction of diazomethane with β -bromomercuriethyl alcohol, and structure of products of addition of mercuric salts to olefines, A., II, 221.

See also Nesmejanov, A. N. Freidus, J. Sec Lehrman, A. Freiherr, H. F. See Mantius, E.

Freilich, J. See Frey, C. N. Freise, F. W., waters of the "dry" region of N.E. Brazil. I., A., I, 203. Classification of non-Brazilian copaiba balsams, B., 368. Properties of Strychnos extracts prepared from curare, B., 979. Oil of Chenopodium anthelminticum, B., 1407.

Frejka, J., Sefranek, B., and Zika, J., preparation of halogenated derivatives of dihydroxydiphenylene dioxide, A., II, 347.

Fremlin, J. H. Sce Gilbert, C. W. Frémont, T. See Dopter, P.

French, C. S., hydrogen and carbon dioxide photo-assimilation in purple bacteria, A., III, 99. Quantum yield of hydrogen and carbon dioxide assimilation in purple bacteria, A., III, 316. Rate of carbon dioxide assimilation by purple bacteria at various wave-lengths of light, A., III, 486. French, H. E. See McShan, W. H.

French, H. S., and Naps, \dot{M} ., ultra-violet absorption and rotatory dispersion of

3-methylcyclohexanone, A., I, 8. and Perkins, D. J., tautomeric equilibria of nitrosonaphthol-naphthaquinoneoxime systems, A., I, 462.

French, M. H., preliminary blood survey of Masai cattle in drought periods, A., III, 248. Nitrogen and mineral metabolism in Trypanosoma congolese disease, A., III, 257, 302. Nitrogen and mineral metabolism during acute infections of sheep with Trypanosoma brucei, A., III, 302. "Salt licks" of Tanganyika Territory, B., 714. Quantity and quality of milk from grade cows, B., 722. Nutritive value of pods of Acacia arabica and Dichrostachys glomerata, B., 725. Nutritive value of groundnut cake made by primitive methods, B., 725. Maize silage, B., 726.

and Hornby, H. E., effect of plane of nutrition on course of animal try-

panosomiasis, A., III, 380. and Raymond, W. D., constants of milk and butter fat in Tanganyika Territory, B., 79.

French, L. R., and Bloomfield, Arthur L., latent deficiency in rats; variations in weight loss on repeated feeding of defective diet, A., III, 466.

French, R. B., and Cowgill, G. R., immaturity of the organism as a factor determining the favourable influence of lactose on utilisation of calcium and phosphorus, A., III, 472.

French, S. J., use of indium in fusible alloys, B., 684.

Frenguelli, B. See Mangini, A. Frenkel, E. W. See under Frenkel, Hermann.

Frenkel, G., glossy surfaces on pliable bases, (P.), B., 30.

Frenkel, H., effect of partial salt deficiency on cell respiration, A., III, 126.

Frenkel, Hermann, covering of wood with resistant coatings, (P.), B., 472.

Frenkel, J., heat movement in solids and liquids and the theory of melting, A., I, 71. Solid-body model of heavy nuclei, A., I, 109. Absorption of light and trapping of electrons and positive holes in crystalline dielectrics, A., I, 114. Relation between electrical conductivity and viscosity of fused salts, A., I, 566.

Frens, A. M., and Brouwer, E., graphical aid in practical cattle-feeding. III. Comparative evaluation of concentrates without calculation, B., 617.

See also Brouwer, E. Frenzel, W., so-called "earth rays," A.,

1, 213. Freon, A. See Auger, P. Frèrejacque, M., polymorphism of sucrose octa-acetate, A., II, 7. Aminoglucoside acetates and their rotatory power, A., II, 371.

Freri, (Signa.) M., transformation products of hydrazides of organic acids. I., A., II, 118.

Frers, J. N., and Lauckner, H., volumetric determination of fluorine, A., I, 631.

Fresenius, P. See Mannich, C. Freud, J., antiluteogenic factor in the anterior pituitary, A., III, 278.

Freudenberg, K., determining constitution of complex natural substances, A., II, 29. From atom to visible fibre, B., 423. Ligninsulphonic acid and its tanning properties, B., 475.

and Boppel, H., methylation of poly-saccharides, A., II, 370.

Meister, M., and Flickinger, E., lignin. XVI. Pine lignin, A., II, 204.

and Soff, K., formation of glucose heptaacctate during acetolysis, A., II, 136.

Freudenberg, W., and Rogers, E. F., naturally occurring monoanhydrohexitols, A., II, 439.

and Vajda, A.M., structure of β -chloralglucose, A., II, 484.

See also Rogers, E. F.

Freudenberg Ges.m.b.H., C., textile threads [from animal fibres], (P.), B., 228. Working up untanned animal hide material, (P.), B., 952. Absorbable [surgical] wadding, (P.), B., 1332. and Elöd, E., waterproof products from animal fibres.

animal fibrous material, (P.), B., 32.

Freudenberger, C. B., and Clausen, F. W., effect of continued theelin injections on body growth and organ weights of young female rats, A., III, 361. Freund, E., and Kaminer, G., diagnostic

agents, (P.), B., 291.

and Pearson, F. F. A., production of therapeutically active [carcinolytio] preparations, (P.), B., 1409.

Freund, H. See Brandt, O.

Freund, Hugo, Dietrich, K., and Schmitt, the Leifo polarisation photometer and its application to the determination of silicon in the foundry laboratory, B., 564. Freundlich, H., polaroid films, A., I, 479. Gels, A., I, 615.

and Jones, A. D., sedimentation volume, dilataney, thixotropic and plastic properties of concentrated suspensions, A., I, 181.

and Steiner, Dora, [preparation of] colloidal solutions of silver and copper, A., I, 514.

See also Coper, K., and Daniel, F. K. Freure, B. T. See Carbide & Carbon Chem.

Corp. Frevel, L. K., crystal structure of ammonium azide, NH₄N₃, A., I, 16. Indexing of powder photographs, A., I, 602.

Frey, C. N., Freilich, J., and Ekstedt, H., correlation of experimental and commercial baking tests when using sponge doughs. II., B., 1398.

Schultz, A., and Light, R. F., effect of active soya bean on vitamin-A, B., 81. See also Gore, H. C., Internat. Yeast Co., Kirby, G. W., Landis, G., and Schultz, A.

Frey, F., velocity distribution of secondary electrons produced by cathode rays in

gases, A., I, 541. Frey, F. E., and Hepp, H. J., non-catalytic addition of ethylene to paraffin hydrocarbons, B., 205.

Frey, F. E., Huppke, W. F., Guyer, J. A., and Phillips Petroleum Co., conversion of hydrocarbon fluids into fuel gas, (P.), B., 209.

and Phillips Petroleum Co., conversion of

hydrocarbons, (P.), B., 411. Sco also Guyer, J. A., and Matuszak,

Frey, F. P., and Johnson Oil Refining Co., [hydraulic] brake fluid, (P.), B., 6.

Frey, K., thermo-plastic synthetic resins from aniline[-formaldchyde] condensation products, B., 466.

Frey, P. R., and Gilbert, E. C., dipole moments of hydrazides, A., I, 444.

Frey, R. W., Smith, W. C., and Wallace, H. A., refining of natural oleo-resin, (P.), B., 945.

See also Smoot, C. C., and Stuart, L. S.

Frey-Wyssling, A., optical differentiation of different types of cellulose, A., II, 180. Structure of the plant cell wall, A., III, 157. Microscopically heterogeneous mode of reaction of fibres, A., III, 287.

Freyberg, J. See Freyberg, W. Freyberg, R. H., relation of experimental atherosclerosis to diets rich in vegetable protein, A., III, 259.

Freyberg, W., Freyberg, J., and Kah, E., exterminating corn beetles and other vermin, (P.), B., 617.

Freyer, E., rapid moisture tester, B.,

Freymann, (Mme.) M., absorption spectra of secondary amines in the near infrared, A., I, 9. Absorption spectra in the near infra-red of mixtures of amines and alcohols; formation of ammonium compounds, A., I, 167.

and Freymann, R., near infra-red absorption spectra and Raman spectra of derivatives of nitrogen. II. Amines. III. Chelation and dissimulation of tetra-co-ordinated nitrogen, A., I, 282, 344. Interpretation of chemical properties on hypothesis of hydrogen linkage; infra-red absorption spectra, A., I, 344.

and Mathieu, J. P., Werner complexes; dissimulation of the N-H vibration in ammine complexes, A., I, 443.

Freymann, R., absorption spectra in the near infra-red of solutions of alcohols in ether or dioxan; formation of oxonium compounds, A., I, 131. The two infra-red OH bands of alcohols and polyalcohols; molecular association, A., I, 282.

See also Barchewitz, P., and Freymann, (Mme.) M.

Freyn Engineering Co. See Ebner, A. J., and Rice, O. R.

Freytag, H., detection of sulphur in organic compounds; preparation of necessary reagent, A., II, 358.

Freze, M. A., and Freze, N. A., determination of sulphate in glass-furnace charges, B., 344.

Freze, N. A., rapid determination of calcium and magnesium, A., I, 531. See also Freze, M. A.

Frick, F. See Du Pont Nemours & Co., E. I.

Fricke, H., chemical-physical foundation of biological activities of X-rays, A., III, 132.

and Cnrtis, H. J., dielectric properties of water; dielectric interphases, A., I, 458.

Fricke, R., structure, heat content, and special properties of active substances. XIII. Structure of active substances. A., I, 115.

and Glemser, O., Hahn's emanation method and density of packing, A., I, 422. Active substances. XXI. Preparation of goethite (a-FeO·OH), A., I, 629.

Lohrmann, O., and Wolf, W., lattice perturbations, particle size, and heat content of pyrophoric iron, A., I,

and Meyring, K., structure, heat content, and special properties of active substances. XIV. Heat content of different crystallised modifications of zinc hydroxide. XV. Activo zinc oxide and stability of zinc hydroxide, A., I, 230.

and Mumbrauer, R., determination of gas-covered part of a surface of con-

tact, A., I, 171.

and Rennenkampff, E. von, influence of crystal type on chemical properties of polymorphic compounds, A., I, 19.

Schnabel, R., and Beck, K., structure, heat content, and special properties of active substances. II. Surface and heat content of crystalline magnesium hydroxide, A., I, 83.

and Zerrweck, W., structure, heat content, and special properties of active substances. XII. Structure and heat content of y-ferric oxide prepared in different ways, and the heat of formation of lepidocrocite (y-FcO-OH), A., I, 117.

See also Mumbrauer, R.

Fricker, H. See Baur, E. Frickey, R. E., and Welding Service, temperature-measuring apparatus, (P.), B., **97.**

Frid, J. L., and Podvojskl, L. N., testing of size of grains in hypo-eutectoid carbon steels, B., 445.

Fridberg, L. M., volumetric determination of sulphate ion, A., I. 324.

Fridericia, L. S., and Schousboe, M., contents of vitamin- B_1 and $-B_2$ complex in rye and wheat breads, B., 969.

Fridman, J. B., influence of chromium on the y field of iron-nickel alloys; transformation diagrams of "irreversible alloys," A. I, 610.

Fridman, R. S. See Volarovitsch, M. P. Fridman, S. G., structure of product of reaction of aβ-dibromo-β-phenylethyl methyl ketone with salts of azoimide, A., II, 214.

Fridman, V. M. See Vassiliev, B. B. Fridrich, G. V., preparation of galvanometer indicators, A., I, 480.

Frieberg, A. F. See Briggs, L. H. Frieboes, W., cause of baker's eczema, A., III, 13.

Fried, H., course of retting of flax stems and retting differences, B., 1033. Fried, S. See Susz, B.

Friedemann, T. E., metabolism of sodium acctoacetate intravenously injected into dogs, A., III, 19.

and Stenhouse, E. E., metabolism of pathogenic yeasts, A., III, 431.

Friedenreich, V., interpretation of secretion and non-secretion of substances belonging to serological groups, A., III, 453:

Friedgood, H. B., cortico-adrenal and neural effects on gonadotropic activity of the pituitary, A., III, 400.

Friedgood, H. B., and McLean, R., effect of an anterior pituitary extract on scrumcalcium and -phosphorus, A., III, 401.

Friedlander, M., Laskey, N., and Silbert, S., effect of estrogenic substance on blood-volume, A., IIÎ, 40.

Friedli, J., the Schoop metal-spraying process, B., 688. Corrosion problems in waterworks, B., 1282.

Friedman, G. J. See Ralli, E. P. Friedman, J. S., and Omnichrome Corp., obtaining colour separation [in photography], (P.), B., 983.
Friedman, M. H. F., esophageal and

gastric secretion in the frog, A., III, 477. and Weinstein, G. L., excretion of gonadotropin by normal males after ingestion and injection of extracts of pregnancy urine, A., III, 437.

Friedman, M. M., and Auerbaeh, O., Congored test for amyloidosis, A., III, 452. See also Brodie, B. B.

Friedmann, E. See Bell, D. J. Friedmann, H., fæcal flora and the line test of normal, rachitic, and healing rachitic rats, A., III, 203. Friedmann, W., technical proposals and

data for an examination of thermal performance of glass-melting tanks, B., 438. Friedrich, A., micro-burette, A., I, 428.

and Mandl, F., micro-Carius determination of sulphur by volumetric method, A., I, 324.

and Sternberg, H., refinement of microcarbon-hydrogen determination by improved weighing technique, A., II, 222.

Friedrich, E., cellulose for artificial silk, B., 534.

Friedrich, G., effect of natural growthsubstance and of β-indolylacetic acid on plant metabolism, A., III, 241.

Friedrich, H., Kerr effect of nitrobenzene in benzene, A., I, 222, 348. See also Voit, K.

Friedrich, I. See Litzow, K.

Friedrich, M. E. See Du Pont de Nemours & Co., E. I.

Friedrich-Liebenberg, A. von. See Brann, J. von., and Dworzak, R.

Friedrichsen, W. See Mumm, O. Friedwald, M., conversion of vegetable

materials into motor fuel, B., 1156. Frieman, R. H., Kennedy, E. R., and Lucas, H. J., hydration of unsaturated compounds. V. Rate of hydration of acetylene in aqueous solution of sulphuric

acid and mercuric sulphate, A., I, 314. Friemann, diagnosis of chronic benzene

poisoning, A., III, 351.

Friend, J. N., latent heat of evaporation of liquid helium, A., I, 122, 230.

Origin of Fahrenheit's thermometric scale, A., I, 269. Ole Romer's and

Fahrenheit's thermometers, A., I, 381. Hale, R. W., and Ryder, S. E. A., solubility of lithium chloride in water between 70° and 160°, A., I, 407.

Friend, W. Z., and Beckwith, E. Q., propane and butane have specific value in production of luminous flames, B., 752.

Fries, G. See Lüers, H. Fries, K., and Beyerlein, F., benzoxazole series, A., II, 78.

Heering, H., Hemmecke, E., and Siebert, G., thionaphthen series, A., II, 72. and Reitz, H., dicyclic compounds and

their analogy with naphthalene. V. Benzthiodiazoles (phenylenediazosulphides), A., II, 124. and Wolter, A., benzthiazole, A., II, 79.

Fries, N. See Kögl, F.

Friese, H., and Clotofski, E., lignin.

Sulphonation of lignin, A., II, 462. and Fürst, H., lignin. VII. Nitration and fission of pine wood, A., II, 384. and Glassner, H., lignin. V. Preparation and sulphonation of lignin from ryo straw and pine wood. VIII. Preparation and sulphonation of lignin from beech wood, A., II, 297, 384.

Högn, V., and Wille, H., lignin. VI. Sulphite liquors, A., II, 297.

Friesen, A. P., optical constants of liquid sodium amalgams, A., I, 555.

Friesen, G. See Hilpert, R. S.

Friesen, S. von, values of fundamental atomic constants, A., I, 441.

Frieser, H., resolving power of photographic layers, B., 188.

Friess, H. See Schwab, G. M.

Friis, K. See Baalsrud, K. Frincisco, J. S. See Dutta, M. C.

Frings, H. W., and Frings, M. S., magnes-

ium sulphate-a new insecticide, B., 826. Frings, M. S. See Frings, H. W.

Frisch, H., preparation, purification, or separation of oxo-[carbonyl] compounds, (P.), B., 1315.

Frisch, M., and Foster Wheeler Corp., pulverisation, (P.), B., 3. Ball-mill pulveriser, (P.), B., I146. Pulveriser, (P.), B., 1146.

Frisch, O. R., Halban, H. von, jun., and Koch, Jorgen, measuring magnetic moment of free neutrons, A., I, 340. Temperature equilibrium of C neutrons, A., I. 388. Sign of magnetic moment of free neutrons, A., I, 441. Magnetic field acting on neutrons inside magnetised

iron, A., I, 543.

Frisch, P., and Schumacher, H. J., thermal decomposition of F_2O_2 , A., I, 86. Attempt to prepare FO: identification of gases resulting from thermal decomposition of F_2O_2 , A., I. 94. Thermal behaviour of F_2O_2 ; kinetics of the decomposition and influence of foreign gases, A., I, 621. Effect of oxygen, fluorine, nitrogen, argon, helium, and carbon dioxide on the rate of decomposition of F₂O₂, A., I, 624.

See also Brodersen, P. H., and Schumacher, H.J.

Frisch, S., rôle of collisions of second type in gaseous discharges, A., I, 104. ²P⁰—³P-term combination in arc spectrum of cerium, A., I, 208.

and Tscherniaev, V., absorption spectrum of monatomic lead vapour in region λ 2200—1600, A, I, 336.

See also Ferchmin, A., and Konovalov, V. Frischmut, M. A. See Nikolaev, V. I. Frischmuth, G. See Klemm, W.

Frisell, B. Seo Eva, W. J. Frisken, J. See Lowe, E. I.

Fritschi, U. See Schneider, G., and

Schneider, G. G. Fritts, S. S., average diameter of particles

just passing the 325-mesb sieve, B., 628. Fritz, A., wet fermentation of coffee, B.,

Fritz, E. H., firing of electrical porcelain, B., 241. Raw material requirements in the whiteware and glass industries, B.,

Fritz, F., hexabromide determination [of linseed oil], B., 365. Oleic acid content of linseed oil, B., 1233.

Fritz, H., electro-drop analysis procedure, A., I, 43, 326. Application of electrolytic rectification of alternating current in electro-drop analysis, A., I, 267. Development of electro-drop analysis. II. and III., A., I, 426, 579.

Fritz, R. Sec Trillat, J. J. Fritz, W., and Homann, F., temperature distribution in boiling water, A.,

I, 71. and Mennicke, U., heat transfer in plate heaters for milk, B., 387.

Fritze, O. See Gen. Electric Co. Fritzman, E. C., superheavy oxygen, hydrogen, and water, A., I, 371.

Fritzsche, E. See Bredereck, H. Fritzsche, H. See Karrer, P., and Lotter-

moser, A.

Fritzweiler, and Rockstroh, four years' working of wood saccharification at Tornesch, B., 381.

Fritzweiler, R., composition of mixtures containing ethyl alcohol, B., 875.

Frivold, O. E., Hassel, O., and Rustad, S., refractive index of heavy ammonia and heavy hydrogen chloride in the visible, A., I, 222.

Frizet, P. See Derrien, Y.

Frocrain, I. See Lasausse, E.

Fröhlich, H., quantum-mechanical discussion of cohesive forces and thermal expansion coefficients of the alkali metals, A., I, 286. Specific heats of electrons of small metal particles at low temperatures, A., I, 353. Theory of electrical breakdown in ionic erystals, A., I, 444. Theory of the λ -point of helium, A., I, 505.

and Heitler, W., relaxation time of nuclear spin in a magnetic field, A.,

I, 341.

See also Simon, Arthur.

Fröhlich, K. W., scaling of pure and alloyed copper, B., 568.

Fröhling, W., blood-cholesterol after administration of oil and cholesterol in health and disease, A., III, 14.

Frölich, F. See Falkenhagen, H.

Frölich, K., heat loss from pig iron in transit from blast furnace to mixer, B.,

Frölich, P., and Gyulai, Z., excitation of coloured gelatin phosphors, A., I, 221. Froentjes, W. See Lifschitz, I.

Frötschner, H., mode of action of composite

developers, B., 1137. Froggatt, A. D., electric batteries or accumulators, (P.), B., 937.

Frohring, W. O., and S.M.A. Corp., hypo-allergic milk, (P.), B., 495. See also Barnett, H. M.

Frohwein, E. See Brohm, K.

Frolich, P. K., metallic oxides as catalysts in certain organic chemical processes, A., I, 316.

See also Standard Oil Development Co.

Frolov, V. S. See Tschmutov, K. V. Fromageot, C., and Bost, G., reducing power of living yeasts during alcoholic fermentation, A., III, 271.

and Chaix, P., respiration and fermentation of Propionibacterium pentosaceum, A., III, 433.

and Moubacher, R., enzymic production of hydrogen sulphide from organic sulphur derivatives, A., III, 312.

and Piret, E. L., nitrogenous nutrition of certain species of propionic acid bacteria, A., III, 273. See also Chaix, P.

Froman, D. K., and Stearns, J. C., absorption of cosmic-ray secondaries and showers, A., I, 6.

Froman, J., spectroscopic investigation of permeability; application in hyper-thyroidism, A., III, 211.

Fromherz, H., light absorption and its significance for chemical questions, A., I, 597.

and Hartmann, Adolf, absorption of light and tautomerism of uric acid, A., II, 36. and Heiss, J., oligodynamic action of silver, A., III, 399.
Sonderhoff, R., and Thomas, Henry,

determination of D2O content of small quantities of water, A., I, 424.

and Walls, H. J., optical absorption and association of stannous halides in aqueous solution, A., I, 78.

See also Aumüller, W.

Fromherz, K., comparison of atropine and syntropan, A., III, 267.

Fromm, F., determination of pyrrole in tobacco smoke, B., 1406.

Fromm, R. See under Lehmann & Voss &

Fron, G. See Lafesse, H.

Fronda, F. M., locust meal as poultry feed, B., 494.

and Clemente, D. D., physical qualities of the hen's egg. V. Age and seasonal changes as factors in rate of deterioration of interior quality of Los Banos Cantonese eggs, B., 973.

Frondel, C., oriented inclusions of tourmaline in muscovite, A., I, 204.

and Ashby, G. E., oriented inclusions of magnetite and hæmatite in muscovite, A., I, 270.

Frosch, C. J., correlation of distillation range with penetration of creosote into paper strips, B., 332.

and Hauser, E. A., fluorescent light microscopy; applications to industrial research, A., I, 49.

See also Hauser, E. A.

Frost, A. A., Mann, D. W., and Oldenberg, O., photometric comparison of absorption lines, A., I, 378.

and Oldenberg, O., kinetics of OH radicals as determined by their absorption spectra. I. Electric discharge through water vapour. II. Electric discharge through hydrogen peroxide, A., I, 34, 85.

Frost, A. V., decomposition of ethane, A., I, 190.

Rudkovski, D. M., and Serebrjakova, E. K., reversible catalytic conversion of n-butylenes into isobutylene, A., II,

See also Dementjeva, M. I., Dintzes, A. I., Dobronravov, R. K., Moor, V. G., Remiz, E. K., and Serebrjakova, E. K.

Frost, D. V., and Elvehjem, C. A., [essential dietary] factor W, A., III, 498. Frost, E. M. See Deaton, W. M.

Frost, H. F. See Powney, J. Frost, J. G. G., and Nat. Smelting Co., melting and holding furnaces, (P.), B.,

Frost, O. I., solubility of sodium cyanide in water, A., I, 233.

See also Opichtina, M. A., and Varasova, E. N.

Frost, S. W., soap washes and oil emulsions as summer sprays for peach, B., 713. Baits for Oriental fruit moth, 1935, B., 713.

Frotscher, H. See Lottermoser, A.

Fruhwirth, O., interpretation of association of water on the basis of dielectric polarisation measurements, A., I, 347. and Mayer-Pitsch, E., dielectric study of

compound formation in binary mixtures, with special reference to the systems diethyl ether-chloroform, acetamide-phenol, and iodoform-quinoline, A., I, 355.

See also Kremann, R., and Pestemer, M. Framkin, A., and Sligin, A., platinum electrode. III. Adsorbed atoms and ions on the surface of a platinum electrode, A., I, 129.

See also Jofa, Z.

Fruton, J. S. See Bergmann, M.

Fry, E. G., effect of adrenalectomy and thyroidectomy on ketonuria and liverfat content of the albino rat following injections of anterior pituitary extract, A., III, 400.

Fry, H. S., and Treon, J. F., action of concentrated aqueous sodium hydroxide on aliphatic nitro-compounds, A., II, 2.

Fry, W. Sec Dow Chem. Co. Fry, W. E. See Swanson, E. E. Frye, R. M. Sec Kent, N. A.

Fu, C. Y. See Chao, C. Y. Fuchs, G. H. von, and Anderson, A. P., effect of solvent extraction on aromaticity of lubricating oils, B., 518.

Fuchs, H., adsorption of amino-acids and other nitrogenous substances from

aqueous extracts, A., I, 300.

Fuchs, K., elastic constants and specific heats of alkali metals, A., I, 124. "Roneusil"—a silver-coloured stainless steel for cutlery and table ware, B., 447.

Fuchs, L., and Kampitsch, A., quantitative, spectrographic determination of quinine and cinchonine in mixtures of the two. A., II, 360.

Fuchs, N., estimation of drop-size in water clouds, A., I, 180. Measurement of dispersion of aërosols, A., I, 303.

and Petrjanov, I., microscopic examination of fog-, cloud-, and rain-droplets, A., I, 154.

Petrjanov, I., and Rotzeig, B., rate of charge of a droplet in an ionic field, A., I. 346.

See also Rotzeig, B.

Fuchs, O., development of gas washing processes, B., 201. Plant construction and chemistry, B., 735.

and Rinn, K., calculation of equilibria in the gas phase from thermal data, A., I, 516.
Fuchs, O. P., and Kottas, H., regularities

and characteristic properties of resistance [photo-]cells, A., I, 428.

Fuchs, W., activated carbon, (P.), B., 872. Fucks, W., spark discharge with alternating voltage; spark discharge with pulsating illumination, A., I, 55.

and Seitz, W., increase of spark potential by irradiation, A., I, 158.

Fudge, J. F. See Ezekiel, W. N., and

Fraps, G. S.

Füldner, A. See Franck, H. H. Fünfer, E., detection of slow neutrons in the atmosphere, A., I, 276. Transformation of boron by slow neutrons, A., 1, 276.

Fürst, F. See Weigert, J. Fürst, H. See Friese, H. See Weigert, J. Fürst, W. See Kindler, K.

Fürsteneau-Obadalek, E. See Plahl, W. Fürth, O., and Peschek, K., micro-determination of glycuronic acid, A., II, 4.

Fürth, O., and Scholl, R., absorption of ferrous and ferric compounds from intestines of rabbits, A., III, 22.

and Thallmayer, H., mechanism of cnzymic oxidative production of melanin from tyrosine, A., III, 428.

Fürth, R., and Sitte, K., the swarm theory of liquid crystals, A., I, 553.

See also Bertl, E.

Fuhrmann, F., micro- $p_{\rm H}$ measurements with quinhydrone, A., I, 260.

Fuhst, W. See Lettre, H. Fujii, H. Sec Kasahara, M.

Fujii, M., low-heat Portland cement, B., 784.

Fujii, Minoru. See Kitagawa, M.

Fujii, N., and Akutsu, N., titrimetric determination of sugar, A., III, 410.

Fujii, Yoneji, composition for cultivation of mushrooms and its preparation, (P.), B., 482.

Fujii, Yoshiro, abrasion [of metals] at high temperature, B., 45. Materials for condenser tubes, B., 48.

Fujimoto, H., hydrogenation of cracked

gasoline, B., 1005.
Fujino, J. See Matsui, M.
Fujioka, K. See Kondo, K.
Fujioka, Y., and Tanaka, Y., molecular spectra of zinc hydride and deuteride, Ā., I, 493.

See also Sumita, E.

Fujisaki, M. See Miwa, T.

Fujita, A., and Ebihara, T., colorimetrie determination of vitamin-C with phospho-18-tungstic acid. I. Reduced vitamin-C. II. Total vitamin-C, A., III, 233. Determination of ascorbic acid, A., III, 233. Distribution of vitamin-C in animal and plant tissues. I., A., III, 233.

and Sakamoto, T., photo-electric determination of extinction coefficients of

solutions, A., I, 535.

Fujita, S., fuel problem of the firebrick industry, B., 782.

Fujita, Y., contact changes of safrole, A., II, 189. Contact changes of camphor,

A., II, 201.

Fujiwara, Tadayoshi, making nickel alloy steels in acid open-hearth furnaces,

See also Rabbitt, J. A.

Fujiwara, Takeo, fine structure of the Laue X-ray pattern obtained by the method of convergent X-rays, A., I, 349. Effect of stress on X-ray spectral line obtained with a single-crystal wire of tungsten by using the method of convergent X-rays, A., I, 553.

Fukagawa, K., and Cho, K., lubricating oil. I. Regeneration of waste lubricating oil with solvents. II. Antioxidation

of lubricating oil, B., 1007.

Fukase, T., liver-glycogen in starvation; effect of nucleic acid, bile acid, and insulin; effect of nucleic acid with or without cholic acid on fasting bloodsugar; production of bile acids in the dog; effect of cholic acid and cholesterol on regeneration of glycogen in the liver after administration of egg white or edestin, A., III, 216.

Fukazawa, Y. See Yoshimura, J.

Fuks, N., scattering of light as a function of relation of particle size to wavelength, A., I, 395. Surface condensation of water vapour, A., I, 602. Determination of dispersion of sulphuric acid mists, B., 1042,

Fukuda, J., oxygen consumption of developing silkworm eggs during artificial

hatching, A., III, 63.
Fukuda, Y. See Ito, Tomoyoshi.
Fukuhara, Y. See Kanamaru, K.

Fukui, T., formation of 7-hydroxy-3:12diketocholanic acid from dehydrocholic acid by B. coli communis, A., III, 357.

Fukumoto, J., and Shimomura, H., production of vitamin-C-like reducing substances by mould fungi, A., III, 355.

Fukunaga, E. See Payne, J. H.
Fukunaga, S. See Iwadare, K.
Fukuroi, T., so-called "transition temperature" of metallic films, A., I, 358. Photo-conducting effect in thin metallic films, A., I, 498. Light absorption of metallic films at low temperatures, A., I, 503. Oblique reflexion of light at a mercury film condensed on the cold surface of glass or tin leaf, A., I, 503. "Transformation temperature" of a metallic film, A., I, 503.

Fukushima, I. See Ishida, Y. Fukutomi, H. See Torikata, R. Fukuwatari, S. See Shikata, M.

Fuld, M., fortifying agents in disinfectants,

B., 297 Fulda, W., Wiedbrauck, E., Wittig, R. R. B.,

Verein. Aluminium-Werke Akt.-Ges., and Goldschmidt, Akt.-Ges., T., pure alumina, (P.), B., 36.

Fulde, A. See Thielepape, E. Fuller, A. D., and Nat. Adhesives Corp., refined sago starch, (P.), B., 277. Dextrinisation of gelatinised starch, (P.), B., 277.

Fuller, A. T., is p-aminobenzenesulphon-amide the active agent in prontosil therapy? A., III, 93.

Fuller, C. S., and Erickson, C. L., X-ray study of linear polyesters, A., I, 172.

Fuller, E. W. See Moran, R. C., and Story, B. W.

Fuller, G. W. See Moll, W. L. H.

Fuller, J. E., and Rugosa, M., bacteriostatic action of dyes with Grampositive cocci, A., III, 183. Sec also Syrocki, A. V.

Fuller, L. P., Lieber, E., and Smith, G. B. L., reduction of nitroguanidine. VIII. Formation of aminoguanidine by reduction in liquid ammonia solutions, A., II, 329.

Fuller, M. L., and Wilcox, R. L., phase changes during ageing of zinc alloy die castings. II. Changes in the solid solution of aluminium in zinc and their relation to dimensional changes, B., 684. Fuller, T. S., age-hardening high-con-

ductivity copper alloys, B., 1220. Fuller Lehigh Co. See Bailey, E. G.

Fulmek, L., and Enser, K., walnut maggot

[control], B., 827.
Fulmer, E. I., and Dykstra, K. G., effect of methods of preparation on fermentative activity of yeast zymin, A., III, 33.

See also Underkoffer, L. A.

Fulton, B. B., lead arsenate and wetting agents for maize earworm control, B., **7**12.

Fulton, C. C., principal chemical tests for morphine, A., II, 360. Fulton, F. D. See Hurst, W. M.

Fulton, M. See Stuart, C. A. Fulton, M. N., and Bryan, A. H., comparative efficiency of mercurial diuretics with and without theophylline (mercuropurin, salyrgan, etc.), A., III, 137.

Fulton, R. A., micro-determination of chloroform extract of beet leafhopper, A., III, 455.

and Mason, H. C., adsorption-absorption and translocation of derris constituents in bean plants, A., III,

Fulton, S. C. See Standard Oil Development Co.

Fulton, W. F., analyses of natural gas, B., 1002.

Fulweiler, W. H., and United Gas Improvement Co., purification of [coal] gas from nitrogen oxides, (P.), B., 318.

Funakubo, E., introduction of the triphenylmethyl group. II. III. Mobility of the bromine atom in triphenylmethylisochavibetol and its derivatives. I., A., II, 454.

Funck-Hellet, constant disinfection by impregnation, B., 191.

Funk, C., vitamin nomenclature, A., III, 493.

Funk, D. See D'Amour, F. E. Funk, E. M. See Kempster, H. L.

Funk, G., [qualitative] distribution of anthocyanins in the red variety of the yellow bird's-nest (Monotropa hypopitys, var. sanguinea, Hausskn.) compared with

that of other plants, A., III, 333. Funk, H., and Baumann, W., reaction of metal chlorides with phenol and β -

naphthol, A., II, 188.

Funk, K. See Uzel, R. Funke, G. L. See Gorter, F. J.

Funke, G. W., fine structure and perturbation in rotation-vibration spectrum of acetylene, A., I, 62. and Lindholm, E., spectrum of acetylene

in the photographic infra-red, A., I,

Funke, S. See Kaufmann, H. P. Funkhouser Co. See Nichols, E. H. Funnell, E. H. See Vahlteich, E. M.

Funsten, S. R., and Atlantic Refining Co., treatment of [acid] sludges [from petroleum], (P.), B., 1162.

Fuog, H. L. See McBride, S. R.
Fuoss, R. M., properties of electrolytic solutions, A., I, 30. Electrical properties of solids. I. Experimental methods, A., I, 582.

Furman, N. H., and Miller, C. O., use of iodine and potassium iodate as volumetric oxidising agents in solutions containing mercuric salts. I. Effect of mercuric salts on stoicheiometry of oxidation-reduction reactions; titration of arsenite and antimonite with standard solutions of iodine or

potassium iodate, A., I, 148. and State, H. M., determination of semimicro-quantities of phosphates in the form of a new complex com- $[Co(NH_3)_5NO_3]H_3PMo_{12}O_{41}$, pound. and observations on analogous arsenic and germanium compounds, A., I, 45. Determination of mercury; indirect volumetric method based on a critical study and improvement of the dichromate-pyridine method of Spacu and Dick, A., I, 47.

See also Miller, C. O.

Furman, R. W., experiments with subsurface [water] filters at Toledo, Ohio, B., 505.

Furnas, C. C., and Leighton, W. B., ethyl alcohol-ethyl acetate and acetic acid-ethyl acetate systems; vapour-liquid equilibrium data, A., I, 411.

Furness, R., and Crosfield & Sons, Ltd., J., production and use of base-exchange materials [from coal], (P.), B., 13. Furness, 1. H., and New Process Rayon,

rayon, (P.), B., 895. Furnestin, J. See Berthois, L. Furr, J. R. See Taylor, C. A.

Furry, W. H., introduction of non-electric forces into Dirac's equations, A., I, 6. Symmetry theorem in the positron theory, A., I, 106. Neutron absorption in aqueous solution, A., I, 275. Fluctuation phenomena in the passage of highenergy electrons through lead, A., I, 591.

Furssov, V., and Vlassov, A., theory of broadening of spectral lines in a homo-

genous gas, A., I, 158. Furter, M. Sce Ruzicka, L.

Furuhashi, Y., biochemistry of the placenta, A., III, 197. Nourishment and excretion of the suckling, A., III, 209.

Fusco, R., and Justoni, R., synthetic method in the pyrazole group. I., A., II, 261. and Musante, C., condensation of aromatic aldoximes with esters of β ketonic acids, A., II, 392.

See also Musante, C. Fuseya, G., Miyakawa, T., Akai, Y., and Simazakai, K., dry cells. I. and II. Measurement of potential of the zinc electrode, B., 360.

Fuson, R. C., and Christ, R. E., condensation of β -cyclocitral with di-

methylaeraldehyde, A., II, 50. Christ, R. E., and Whitman, G. M., condensation of [aryl] propenyl ketones with ethyl oxalate, A., II, 103.

Lippert, A., Young, R. V., and Hully, H. H., cyclopentane derivative from aδ-dibromo-aδ-dibenzoylbutane, A., II,

See also Babcock, S. H., jun., Christ, R. E., Hully, H. H., and Ross, W. E. Fussteig, R., hydrogenation of hydrocarbons, B., 108. Selective solvent extraction [of lubricating oils], B., 316. Autoxidation of fats and oils and new methods to prevent it, B., 584. Relation between bleaching power and structure of filter-clays, B., 749. Production of motor spirit by polymerisation, B., 751. Preparation of valuable products [alcohols] from petroleum gases, B., 1297.

Fntagami, T., electric explosion spectrum of metals, A., I, 103.

Fnwa, K., glasses coloured by carbonaceous matter. III. and IV., B., 138, 344. Glasses coloured by sulphurous matters. I., IV., and V., B., 780, 1048, 1338. Determination of carbon in glasses coloured by carbonaceous matter, B.,

G.

G.W.B. Electric Furnaces, Ltd. See Preston, G. N.

Gaal, L. See Ionesen, M. V. Gaaz, F. V., and Lubnikova, M. G., influence of iron from red clay on pig development, A., III, 459.

Gabaldson, A., carbarsone: action on Trichomonas hominis and on rat trichromonads in vitro, A., III. 34.

Gabbard, J. L., and Dole, M., re-determination of the deuterium-protium ratio in normal water, A., I, 154. Glass electrode. I. Glass electrode errors at 30°. II. Properties of lithium glass electrodes, A., I, 567.

Gabbard, J. L. See also Amis, E. S.Gabbe, E., vitamin C in urine and blood, A., III, 326.

Gabbrielli, M. C. See Cattaneo, C., and Scoz, G. Gabel, J. O., reaction of a-oxides with aryl-

amines, A., II, 409.

and Zubarovski, V. M., condensation of isatin with phenols. I. a-Naphthol, A., II, 264.

Gabel, J. W. See Zumstein, R. V.

Gabel, L. F., assay of free acidity in shaving cream, B., 585.

Gabel, W. See Brand, K. Gaber, E. See Klein, W.

Gaberman, B. G., removing sulphur dioxide

from flue gases, B., 747. Gabler, F., determination of thermal conductivity of metals, B., 354.

Gabler, H. E. See Cunningham, G. E. Gabor, D., mechanical tracer for electron trajectories, A., I, 267.

See also Brit. Thomson-Houston Co. Gabriel, A. See Roller, P. S., and Schroeder, W. C.

Gabriel, C. L., and Resinox Corp., synthetic [alkyd] resin varnish compositions, (P.), B., 472.

Gachot, H., uses and manufacture of [unfermented] grape juice, B., 975.

Gad, G., and Naumann, K., colorimetric determination of aluminium in water, B., 298.

Sec also Haase, L. W.

Gadaskina, I. \acute{D} ., and Schtessel, T. A., resorption, distribution, and elimination of fluorides during the poisoning of an animal with sodium fluoride, A., III,

Gadd, E. R., metallurgical problems of aëro-engino manufacture, B., 575. Magnesium alloys in aeroplanes, B., 686. Gaddum, J. H. See Clark, A. J. Gaddy, V. L. See Wiebe, R.

Gadean, R., determination of beryllium, aluminium, and magnesium in ferrous alloys, B., 47. Analysis of pure aluminium, B., 576.

Gäbler, H., cellular cooling plates for colloidal materials. (P.), B., 97.

Gaebler, O. H. [with Abbott, L. D., jun.], apparent creatinine of serum and laked blood-ultrafiltrates, A., III, 83.

Gaehtgens, G. See Eufinger, H. Gärtner, K., Koncz, A., and Tillmann, M., composition of Hungarian tobaccos fermented in heated and unheated rooms,

Gärtner, M. See Waldschmidt-Leitz, E. Gärtner, W., recent developments in manufacture of paper and cellulose, B., 1319.

Gaerttner, E. R., and Crane, H. R., y-radiation from lithium bombarded with protons, A., I, 108. y-Radiation from lithium and fluorine bombarded with protons, A., I, 592.

Gätzi, K., and Reichstein, T., crystallised l-threonolactone and synthesis of lthreonic acid a-methyl ether, A., II,

Gaev, I. S., diffusion of titanium and dissociation of titanium compounds, A., I. 24.

and Gendler, B. S., three-dimensional diagram connecting grain size, temperature, and carbon content of steels, B., 790.

Gaffron, H., explanation of induction period in assimilation of carbon dioxide by plants], A., III, 409.

Gaffron, H., effect of hydrocyanic acid and hydrogen peroxide on the Blackman reaction in Scenedesmus, A., III, 443. Induction in assimilation of carbon dioxide by green algae, A., III, 501.

Gage, H. P., glass colour filters for special

applications, A., I, 378.
Gagentorn, V. O. See Amsterdamski, J. A.

Gagliani, M. See Artom, C. Gagnon, P. E. See Cloutier, L.

Gagyi, J. von, bactericidal and antitoxic action of vitamin-C, A., III, 319.

Gaidies, G. See Gen. Electric Co. Gaidry, H. L., use of copper pipe for

[town's] gas services, B., 747. Gaiennie, G. B., and Elastic Asphalt Co.,

expansion joint, (P.), B., 998.

Gaikhorst, G. See Waterman, H. I. Gailer, K., light excitation by corpuscular collision, A., I, 1.

Gaind, K. N., synthesis of local anaethetics. I., A., II, 243.

Khan, A. W., and Ray, J. N., synthesis of local anæsthetics. II., A., II, 386.

Gaines, J. M., jun. See Linde Air Products Co.

Gainey, P. L., tolerance of nitrate by pure cultures of Azotobacter, B., 269. Influence of absolute reaction of soil solution on growth and activity of Azotobacter, B., 1386.

Gairdner, D. Sce Bennett, D. Gaites, G. H., automatic control for vulcanisers and calender rolls [for rubber],

B., 1091. Gajdos, A. See Fiessinger, N.

Gajendragad, N. G. See Jatkar, S. K. K. Galaine, C., and Houlbert, C., preservation of fermentable liquids, especially milk, B., 1122.

Galamini, A., blood-alcohol curve and experimental beri-beri, A., III, 76.

and Celli, V., variations in the blood-alcohol curve produced at different times after a meal, A., III, 165.

and Falvo, E., consumption of oxygen by central [nervous] preparations, A., III, 172.

Galan, \hat{J} . C. See Ramirez, R. L. Galanti, A. See Shorgi, U.

Galassini, J. P. See Brownlee, A. L. Gale, E. F., determination of galactose by Hagedorn and Jensen's method, A., III, 162.

See also Stephenson, M. Gale, P. T. Sec Imperial Chem. Industries. Gale, R. A. See Wallerstein, L.

Gale, W. A. See Allen, W. H.
Galey, H. J. See Amer. Securit Co.
Galhac, E. See Jaulmes, P.

Galinker, I. S., cryoscopy and conductivity of halogen acids in ethyl alcohol-benzene solution, A., I, 406.

Galinovsky, F. See Späth, E.

Gall, D. See Robertson, G. J.
Gall, H. See Bamann, E.
Gall, O. E., zinc sulphate studies in soil,

B., 1383. See also Rogers, L. H.

Gallagher, T. F., Koch, F. C., and Dorfman, R. I., quantitative extraction of sex hormones from urine, A., III, 74. See also Peterson, D. H.

Gallaher, A. H. See Barrett Co. Gallaher, W. U., treatment of Fox River water by the silver mineral process, B.,

Gallais, F., constitution of solutions of potassium bismuthi-iodides, A., I. 135.

Gallay, W., effect of concentration on viscosity of starch pastes and of lyophilic sols, B., 276. Alteration of flow characteristics and texture of starch pastes, B., 276.

and Bell, A. C., viscosity of corn-starch pastes, B., 76. Effect of acid modification on some properties of starch

pastes, B., 276.

Gallerani, G., variations in respiratory capacity of hamoglobin and in resistance of blood-corpuscles in different levels of sedimented blood; multiplicity of hæmoglobin, A., III, 163. Mechanism of the action of ultra-violet light, A., III, 175. Electric charge on [dry] vitamin-C, A., III, 189.

Gallien, L., comparative action of pituitary extracts and of gonadotropic substances of urine on ovulation in Rana temporaria, A., III, 229. Masculinising action of testosterone propionate and the differentiation of the sex of Rana temporaria, L., A., III, 402.

Gallier, R. See Lecoq, R. Galligan, W. E. See Levine, M. Galliher, E. W., geology of glauconite, A., I, 383.

Gallo, Gino, action of hydrogen on oxides and sulphides of copper, and determination of copper as cuprous sul-

phide. V., A., I, 532.

Gallo, Giuseppe, and Ardy, C., reducing substances in sterile autolysates of the liver of depancreatised dogs treated with choline, A., III, 468. Lipin degradation in sterile autolysates of the liver of depancreatised dogs treated with choline, A., III, 468.

See also Ardy, C.
Gallo, M. See Vodret, F. L.
Galloni, L. See Jourdan, F.

Galloway, A. S., Dewar, J., and Read, J., phellandrenes. III. Correlation of l-a-phellandrene with l-4-isopropyl-∆²-cyclo-

hexen-1-one, A., II, 26.
Galloway, H. M. See Wilde, S. A.
Galloway, I. A. See Elford, W. J.

Galloway, L. D., uses of sheet viscose in microbiological technique, A., III, 333. Mosaic and other diseases of sugar cane; report of Imperial Mycologist, B., 378.

Galloway, T. McL., osmotic pressure and saline content of the blood of Petromyzon fluviatilis, A., III, 114.

Galloway, W. R. See Jones, F. L. Gallup, B. E. See Snoke, H. R.

Gallup, J., vacuum-cell luminescence microscope and its use in the study of luminescent materials, A., I, 330.

Gallup, $J.\ L.$ See Radio Corp. of America. Gallup, $W.\ D.$, cottonseed and its products,

B., 1365.

Kuhlman, A. H., and Waldby, R. M. variations of chemical and physical properties of butter fat as revealed by melting time, B., 804. See also Keith, K. I., Kuhlman, A. H.,

and Reder, R.

Galperin, F., work of the electromagnetic field in dynamic theory of Röntgen interference and according to quantum mechanics, A., I, 391.

Galpern. See under Halpern.
Galstaun, L. S. See Gillespie, L. J.
Galvinker, I. S. See Semenov, A. I.
Galvao, P. E., and Pereira, J., influence of lactic acid on respiration of mammalian brain in B_1 avitaminosis, A., III, 103.

Galvão, P. E., and Pereira, J., action of the vitamin-B complex on muscle respiration in experimental beri-beri, A., III,

Galvez, N. L., plant-food reserve in lowland and upland soils, B., 166.

Galy, P. See Jourdan, F.

Gamble, D. L., thixotropy in paints; influence on packaging and application properties of flat wall coatings, B., 62.

and Barnett, C. E., scattering in the near infra-red as a measure of particle size and size distribution, B., 809.

See also Imperial Smelting Corp. Gamble, J. T. See Limber, C. R. Gammo, H. See Kasahara, M.

Gamow, G., present position (June 1, 1937) of the theory of β -decay, A., I, 592.

and Teller, E., generalisations of the β-transformation theory, A., I, 214. Ganapathi, K., structure and probable biogenesis of β -caryophyllene, A., II, 346. Biogenesis of the terpenes, A.,

See also Chakravarti, S. N., and Guha, P. C. Gand, \hat{E} . See Tian, A.

Gandini, A., secondary alcohols from cincole, A., II, 295. Essential oil of [Italian-grown] Eucalyptus rostrata, B., 287.

and Straneo, (Signa.) C., acid character of monoximes, A., II, 275.

Gandrud, B. W., and Coe, G. D., washability studies of coal from the Henry Ellen bed at Acmar No. 5 mine, Acmar, Ala., B., 101.

Gane, R., respiration and water content of seeds, A., III, 80. Respiration of bananas in presence of ethylene, A., III, 500. Effect of ozone on fruit, B., 282. Volatile products of fruits, B., 282. Respiration of bananas, B., 614. Transmission of light by eggs, B., 1262. See also Smith, A. J. M.

Gangal, D. D. See Limaye, D. B. Gangl, J., metal poisoning by food-stuffs, B., 283.

and Liedl, E., determination of small amounts of lead in milk, B., 833.

and Waschkan, A., microchemical investigation of drinking water; [determination of total solids], B., 849. Ganguli, K. Seo Bhattacharyya, P. B.

Ganguli, N. See Krishnan, K. S. Ganguli, S. C. See Mukherjee, J. Ganguly, K. R. See Chatterji, D. N. Ganguly, N. C. See Bardhan, J. C.

Ganguly, P. B., and Chakravarti, S. K., viscosity of binary systems, A., I, 232. See also Chakravarti, S. K.

Ganguly, S. N., addition of hydrogen halides to butadiene, A., II, 43. Hæmelysis by the venom of the Indian cobra (Naja tripudians), A., III, 453. Indian snake venoms. III. Enzymes in cobra and daboia venom. IV. Mechanism of the coagulant action of daboia venom on blood, A., III, 458.

and Malkana, M. T., Indian snake venoms. I. Daboia venom: its chemical composition, protein fractions, and their physiological action. II. Cobra venom: its chemical constitution, protein fractions, and their physiological actions, A., III, 296, 458.

See also Taylor, J. Ganiatsas, C., vegetation on saline soils of Salonika, B., 73.

Ganino, G., medicinal and perfumed glycerin of starch (autoclave prepar-

ations), B., 285.

Gann, J. A. See Dow Chem. Co.

Gans, D. M. See Harklins, W. D.

Gans, R., degree of depolarisation of light scattered under different conditions, A., I, 496.

Ganssen, R. H., present condition of a prelimed soil, B., 1383.

Gansser, A., hides and skins, B., 1093. Report of the fifth Pan-European [Leather Chemists'] Commission on preservation of and defects in hides

and skins, B., 1247.
and Vogel, Wilhelm, use of animalised fibre ("Tessan") for testing colour of tanning materials by a modified method, B., 952.

Gant, V. A., and Shaw, H. D., odour concentration in air-conditioned structures; determination by freezing-out and osmoscope method and reduction by activated carbon, B., 296.

Gantt, W. H. See Wolff, H. G.

Ganz, E., absorption spectrum of aqueous solutions between 0.70 μ and 0.90 μ . II., A., I, 180. Absorption of liquid water between 2.5 μ and 6.5 μ , A., I, 218. Ganzauge, M. T., production of aluminium

bronze castings to withstand high pressure, B., 1223.

Ganzenmüller, W., composition of mediæval stone glazes, B., 547.

Gapon, E. N., and Prianischnikov, A. E., adsorption of monovalent cations by the soil, B., 1098.

Gaponenkov, T. K., mechanism of gelation of the system pectin-sugar-acid, A., I, 183. Physico-chemical properties of araban, A., I, 304. Action of alkalis on araban, A., II, 179. Bromination of terpenes, A., II, 295. Viscosimetric : determination "bound" water in hydrosols of pectic substances, B., 615.

and Mimrikova, V. N., action of pectic substances on sugars, A., I, 181. Influence of salts on gelation in the

system pectin-sugar-acid, A., I, 183. Garach, J., red antimony sulphides. III. Primary materials, B., 809.

Garan, R. S. See Kiese, M. Garber, A. I., latent energy and residual tension of plastic deformed rock-salt, A., I, 120.

Garbuny, M., relative intensities and transition probabilities of the orange

neon lines, A., I, 589.
Garbutt, F. A. See Hatherell, G. A.
Garbutt, H. R., and Hubbard, R. S.,
interconversion of ketose and aldose sugars in dilute aqueous solution, A., II, 51.

See also Hubbard, R. S., and Thorn, G. W.

Garbutt, R., and Butterfield, Ltd., W. P., lead-plating of metals, (P.), B., 1227.

Garcia-Blanco, J., utilisation and tolerance of the monosaccharides, A., III, 261.

Gard, E. W. See Union Oil Co. of California.

Gard, J. S. F., heat insulation: selection of suitable materials for various purposes, B., 507.

Gardam, G. E., obtaining adherent electrodeposits on chromium and stainless steel, B., 453. Removal of electro-deposits of nickel from steel, B., 1358. See also Hothersall, A. W.

Gardiner, P. C., effects of gas mixing with particular reference to the Ott number, B., 1296.

Gardiner, W. C., and Sanders, H. L., errors of the glass electrode, A., I, 428.

Gardiol, P. See Goldstein, H.

Gardner, D., magnesium sulphide and magnesium, (P.), B., 933. Magnesium or alloys thereof, (P.), B., 1072, 1228. Magnesium from dolomitic ores, (P.), B., 1228.

Gardner, E. D., and Leddell, W. A., design and operation of a 4-ton-per-hour gold and silver ore-sampling plant, B., 49.

Gardner, E. W. See Texas Co.

Gardner, F. See Kerr, H. L. Gardner, F. E., and Marth, P. C., parthenoearpic fruits induced by spraying with growth-promoting chemicals, A., III, 502.

See also Brown, N.A.

Gardner, G. S., and Brewer, J. E., vapour pressure of commercial high-boiling

organic solvents, B., 522.

Gardner, H. A., pigments and film-forming compositions containing the same, (P.), B., 65. Films, strips, filaments, or other objects, (P.), B., 261. Composition containing a cellulose compound and a titanium salt of an aromatic polybasic acid, (P), B., 701. Suggestions on new experimental uses for roof coatings, B., 786. Sun-spray rapid test-rack; development in [accelerated] exposure tests [for paints and enamels], B., 811. Chia [seed] putnalates, B., 945. Copahyba [copaiba] oil [balsam], B., 1084. Practical testing of paints for brick surfaces, B., 1087. oil, B., 940. Applications of metallic

Cornthwaite, C. R., and Hart, L. P., mildew prevention [on painted surfaces]. V., B., 369.

and Sward, G. G., Brazilian resins, B.,

Sward, G. G., and Hart, L. P., mildew tests [on painted surfaces] at Panama Canal Zone, B., 1087.

Gardner, J. H., and Joseph, L., anthrone derived from barbaloin and isobarbaloin, A., II, 512. and McDonnell, T. F., anthranoI-β-d-

glucoside, A., II, 276.

Gardner, M. E. Sec Varney, R. N.

Gardner, R., measuring capillary tension of soil moisture over a wide moisture range, B., 706.

Gardner, T. S. See Buehler, C. A. Gardner, W. See Richards, L. A. Gardner, W. H., shellac, the parent of modern plastic resins, B., 808. Plastic properties of shellac, B., 943.

See also Murty, N. N., and Payne, H. F.

Gardner, W. U. See Allen, E., and Strong,

Gardner-Richardson Co. See Swan, J. H.Gargiulo, A., relation between hamoglobin content of blood and the blood groups, A., III, 110.

Garilli, D., extraction and purification of Ricinus peroxidase, A., IIÎ, 392.

Garino, M., oxidation of sucrose in aqueous solution, B., 174.

Garipuy, A., and Valdiguié, P., bloodprotein in anaphylactic states, A., III,

Garkuscha, iodine absorption by mercerised cotton, B., 1040.

Garlock Packing Co., Hubbard, C. R., and Waples, R. M., machinery packings [washers], (P.), B., 1150.
Garlough, F. E. See Horn, E. E., Munch,

J. C., and Ward, Justus C.

Garman, R. L. See Mouquin, H.

Garner, J. H., symposium on chemical methods of treating sewage; British practice, B., 397.

Garner, L. P., machined metal stuffing-box seals adapted to high-vacuum technique, B., 1283.

Garner, R.J.See Pearse, H. L.

Garner, W., olive oil and other combing oils, B., 462.

Garner, W. E., and Maggs, J., adsorption of carbon monoxide on zinc oxide, A., I, 75.

and Pike, H. V., dehydration nuclei on crystals of copper sulphate pentahydrate, A., I, 553. See also Cooper, J.A.

Garnier, F., apparatus for increasing draught in furnaces and for purifying flue gases, (P.), B., 1144.

Garnier, H. See Lecoq, R.

Garnier, R., measuring powerful sources of a-rays, A., I, 332. Garnot, R. See Chambard, P.

Garola, J., agronomic studies on flint-clay soils in Eure-et-Loir [North France], B., 819. Effect of nitrogen, thickness of sowing, and climatic conditions on wheat culture, B., 821.

Garratt, D. C., determination of small quantities of strychnine in presence of caffeine (compound syrup of glycerophosphates), B., 1132.

Garre, B., suitability of X-ray tests for examination of lead-bronze bearings, B.,

Garre, G., influence of design [of pocketlamp batteries] on corrosion-resistance, B., 459.

Garreau, (Mlle.) Y., oxidation of quinol by air in presence of methylammonium sulphite; oxidation of quinolsulphonic acid in presence of methylamine, A., II, 66. Preparation and constitution of cyclohexylammonium 2:5-di(cyclohexylamino) - 1:4-benzoquinonc-3:6-disulphon-2:5-di(cyclohexylamino)-1:4-benzoquinone, and quinol-2:5-disulphonic acid, A., II, 251. Oxidation of quinol in air in presence of n-butylammonium sulphite, A., II, 338. Garrett, O. F. See Overman, O. R.

Garrett, R. L. See Blum, H. F. Garrett, S. D., bromothymol-blue in aqueous sodium hydroxide as a clearing and staining agent for fungus-infected roots, A., III, 444. Soil conditions and "take-all" disease of wheat, B., 712.

Garrick, F. J., kinetics of co-ordination reactions in the cobaltammine series. I. Aquotisation of the chloropentammine ion, A., I, 248. Possible acid-dissociation of metal-ammonia ions, and its bearing on reactions, A., I, 248.

Garrido, J., fibrous brucite, A., I, 289. See also Palacios, J.

Garrigue, H., radioactivity of mountain air, A., I, 101. Apparatus for the measurement of low concentrations of radon, A., I, 331. Radioactivity of air included in the snow layer near the soil on mountains, A., I, 584.

Garrison, E. R., and Jenny, H., effect of heat on colloidal, physical, and chemical changes occurring in milk, B., 1398.

Garry, (Mlle.) M. See Montagne, (Mlle.) M. Garsoglio, \acute{E} . See Industrias Quimicas Argentinas " Duperial " Soc. Anon.

Garta, I., influence of vitamin-C on colleidosmotic pressure and protein content of blood-serum, A., III, 290.

Garton, E. L., analyses of crude oils from some fields of Michigan, B., 866.

Gartrell, H. W. See Beck, A. B. Garvey, B. S., jun., chemistry of soft rubber vulcanisation. V. Treatment of dilute rubber solutions with sulphur chloride, B., 372.

Halley, L. F., and Allen, C. F. H., aryl iododihalides as halogenating agents,

A., II, 490.

Garvey, P. H., and Rockwell, F. V., lead content of spinal fluid with reference to multiple sclerosis, A., III, 90.

Garwood, F. See Schaffer, R. J. Gary, W. W., thermal polymerisation of gaseous hydrocarbons, B., 867. Treatment of hydrocarbon oil, (P.), B., 872.

Ward, J. T., and Gasoline Products Co., treatment of hydrocarbon oils, (P.),

Gary, W. Y., effect of freezing on oranges, B., 182.

Garzuly-Janke, R., condensation of aromatic aldehydes and amines in mineral acid solution, A., II, 21.

Gas Fuel Corporation. See Russell, R. H. Gas Industries Co., production of gases under pressures, (P.), B., 1149. Separating air or other gaseous mixture into its constituents, (P.), B., 1149. Heat interchange in the liquefaction of air and other gases, (P.), B., 1149. Removal of condensed particles, (P.), B., 1149. Treating fluids in heat-transfer relationship with one another, (P.), B., 1149.

Gas Light & Coke Co., and Adam, W. G., sulphur dioxide, (P.), B., 239.

Dieterichs, W., and Bruckland, J., control means for gas-fired furnaces or ovens, (P.), B., 1150. and Dougill, G., purification of town's

gas, (P.), B., 1159. Hutchison, W. K., and Dougill, G., removal of hydrogen sulphide from gases, (P.), B., 14.

Pexton, S., Hutchison, W. K., and Birks, F. M., treatment of gases with adsorbent solids, (P.), B., 1290.

and Randall, E. L., coal gas, (P.), B., 318. and Siderfin, N. E., carbonisation of coal, (P.), B., 872.

Gas Purifying Materials Co., Inc. See Keller, T. P. Gaskell, J. See Pilkington Bros.

Gasoline Antioxidant Co. See Ayers, G. W., jun., Bennett, H. T., Borden, E. G., Downing, F. B., Hyman, J., McMnllan, E. W., and Rogers, T. H.

Gasoline Products Co., Inc. See Atwell, H. V., Gary, W. W., Hampton, A. C., Hargrove, G. C., Keith, P. C., jun., Sullivan, P. H., Thomas, D. L., and Ward, J. T.

Gasow, H., control of the cabbage fly (Phorbia brassica, Behé.) by spraying

and dusting, B., 171.

Gaspar, B., single- or multi-colour photographic and kinematographic films, (P.), B., 294. Photographic light-sensitive material, (P.), B., 294. Multicolour photographic pictures, (P.), B., 1410. Combined coloured and black and white photographic and kinematographic pictures, (P.), B., 1411.

Gaspar y Arnal, T., treatment of molasses for production of foods, feeding-stuffs, and fertilisers, B., 726.

Gaspari, H. J. R. See Ambrose, H. A.

Gassmann, A. See Rupe, H. Gassmann, T., [carbonate content of inorganic bone material and its synthesis], A., III, 86.

Gassner, G., and Goeze, G., physiological activity of rust-infected cereal leaves, A., III, 286.

and Hassebrauk, K., control of cereal rusts by means of chemicals, B., 822.

Gastaldi, C., and Princivalle, E., optical

sensitisers. II., A., II, 122.
Gastinel, R. See Rouslacroix, A.
Gates, J. W. See Noller, C. R.

Gates, W. R. B. St. J. See Cow & Gate,

Gathercoal, E. N. See Snyder, R. K., and Vicher, E. E.

Gathmann, E., ingot phase of steel production, B., 1350.

Gatica, T. Sec Williams, D.

Gatschkovski, V., and Terenin, A., quenching of fluorescence of solids by adsorbed gases, A., I, 346.

Gattefossé, R. M., hydrolysis of shampoo preparations, B., 585.

Gatti, C., Menendez, P., and Knallinsky, A., influence of meat and of maté on human and experimental scurvy, A., III, 45. Gatto, M., improvements in combustion

furnaces for treatment of native sulphur ores, B., 665.

Gattuso, S., plastic composition, (P.), B., 700.

Gatty, O. See Craxford, S. R., and Dean, R. B.

Gaubatz, F., changes in silicic acid content of human blood, in health and in tuberculosis, following administration of lipinsoluble siligran, A., III, 113.

Gaubert, P., diffusion of colouring matter into artificially coloured phthalic acid crystals under the influence of heat,

A., I, 178.

Gauchard, F., putting liquids in suspension in a gaseous medium, (P.), B., 741.

Gaucher, G. See Sirot, A.

Gaudin, A. M., identification of opaque solids by selective iridescent filming. I. Optics, A., I, 511. Control of [mineral] flotation by use of the microscope, B., 685.

and Malozemoff, P., hypothesis of the non-flotation of sulphide minerals of

near-colloidal size, B., 49.

Gaudin, R., graphite paints, with particular reference to their use on structural steel,

Gauduchon-Truchot, H., application of sulphuric-perchloric acid method of destruction [of organic materials] to qualitative test for nitrogen, A., II, 128.

Gauger, A. W., significance of ash-softening temperature and ash composition in the utilisation of coal, B., 1000.

See also Wright, C. C.

Gaul, L. E., and Stand, A. H., clinical spectroscopy; retention of nickel in psoriasis, A., III, 462.

Gault, H., and Chablay, A., action of organic acids on their esters, A., II, 4. and Cogan, M., ethyl a-formyl-a-a'-

hydroxyethylglutaconate, A., II, 398. Gault, L. See Allen, H. R. Gaunt, R., application of latex to textiles,

B., 31.

Ganpp, R. See Scharrer, E.

Gaus, W., feed-protein substitutes, B., 1265. Gause, G. F., nicotine inhibition of oxidation and fermentation, A., III, 66.

Gaut, G. C., Huggins, B. F., and Plessey Co., electric-resistance elements, (P.), B., 361.

Gautheret, R., cultures of cambial tissue, A., III, 498.

See also Guilliermond, A.

Gautier, J. A., N-hydroxyalkyl-2-pyridones, A., II, 75. Determination of organic iodine, A., II, 128. Dehalogenation of organic iodo-compounds by hydrogenation in alkaline medium; simple determination of small quantities of organic iodine, A., II, 363.

and Lévy, J., structure and physiological action of a-pyridones, A., III,

Gautrelet, J., Corteggiani, E., Kaswin, A., and Mentzer, C., liberation of acetylcholine from the liver by enzymes, A., III, 8.

See also Corteggiani, E., and Mentzer, C. Gauzelin, and Crussard, reactivity of coals towards permanganate, B., 1291. Gavanker, (Miss) K. D. See Hirwe, N. W.

Gavasch, E. L., and Vaniaschina, V. P., apparatus for analysis of nitratenitrite mixtures, A., I, 481. Gavăt, J. See Nenitzescu, C. D.

Gaverdovskaja-Juschkevitsch, M. V., isomerism of triphenylmethane, A., II, 284.

Gavoret, (Mme.) J., adsorption of metallic cations by cellulose; isoelectric point of cellulose, A., I, 408.

Gavrilescu, N., and Ionescu, N., obtaining active adrenaline and acetylcholine perfusates, A., III, 37. Variation in concentration of potassium and calcium ions in cholinogenic and adrenalinogenic perfusates obtained by stimulation of the vago-sympathetic trunk, A., III, 214.

Gavrilov, N. I., and Krasilnikov, A. M., separation of adrenaline from solution or from adrenal glands by electrophoresis, A., III, 277.

and Romanov, V. M., chemistry of tobacco. V. Do fermented leaves contain protein? A., III, 245. See also Botvinnik, M. M., and

Stacheeva-Kaverzneva, E. D.

Gaw, H. Z. See Tang, P. S. Gawalowski, H. See Jantsch, G.

Gawrych, S. See Krause, A. Gawrychowa, M. See Krause, A.

Gay, L., and Nogaret, G., interfacial tension between a benzene solution of palmitic acid and aqueous solutions of potassium hydroxide, potassium cyanide, or barium cyanide, A., I, 130.

and Raymond, L., interfacial tension between a solution of palmitic acid in benzene and an aqueous solution of mono-, di-, or tri-ethanolamine, A.,

Gay, N. H., vapour-condensing and liquid-

cooling apparatus, (P.), B., 741. Gay, N. N. See Standard Oil Co. of California.

Gay, P. F., and Travers, M. W., thermal decomposition of dimethyl ether, A., I,

Gayda, T., physiology of the kidneys, A., III, 6.

Gaydon, A. G., absorption-reflexion spectra of the [ceramic] chrome colours, B., 439.

Gaydon, A. G., and Pearse, R. W. B., band spectrum of chromium hydride, CrH, A., I, 493.

See also Pearse, R. W. B.

Gayer, F. H., and Gen. Motors Corp., alkyl halogen compounds, (P.), B., 324. Gayet, R., and Minz, B., liberation of acetylcholine in the blood of the pancreatic-duodenal vein [of dogs] after injection of ergotamine, A., III, 93. Liberation of acetylcholine in the blood of the pancreatic-duodenal vein [of dogs] by stimulation of the splanchnic nerve, A., III, 93.

Gayford, E., ore treatment as factor in small goldmining enterprises, B., 48.

Gayler, M. L. V., constitution of the alloys of silver, tin, and mercury, A., I, 455. Effect of addition of small percentages of iron and silicon to a high-purity 4% copper-aluminium alloy, B., 922. Dental amalgams, B., 925. Theory of age-hardening, B., 926.

and Wainwright, C., alloys of iron. XII. The $\beta_{\rm M}$ transformation in manganesc-rich iron-manganese alloys,.

A., I, 297.

Gayley, C. T., determination of nitrogen and carbon in the same sample, A., II, 476.

Gaylord, T. S. See Kodak, Ltd.

Gaze, H. W. See Kerrin, J. C.
Gazezian, L. N., micro-etching of bearing alloys with a tin basis, B., 570. Macroetching of tin-base babbitt metal with ammonium polysulphide, B., 684.

Geary, C. G. See Harned, H. S. Geary, W., hot-metal practice in five melting shops on the North-East coast, B., 1058.

Gebauer, K., hard chromium-plating and its uses, B., 1358.

Gebert, F., reaction between arsenic trihydride and hæmoglobin, A., III, 450. Gebhardt, H., devices for producing acetylene gas, (P.), B., 207.

See also Meuwsen, A.

Gecht, I. I. See Schischkin, V. V. Geddes, A. L. See Maass, O.

Geddes, W. F., protein studies (wheat and barley), B., 721. Milling and baking studies, B., 721. Analyses of maize and buckwheat, B., 721. Flax studies,

and Aitken, T. R., comparative quality of flours from corresponding wheats milled on an Allis-Chalmers experimental mill and a Brabender auto-

matic laboratory mill, B., 1118.
See also Aitken, T. R., Binnington,
D. S., Eva, W. J., and Lehberg, F. H. Gee, G., and Rideal, E. K., catalysed polymerisation in monolayers of drying oils, A., I, 369.

Gee, W. P., Kiersted, W., and McCarty, B. Y., solvent dewaxing process, B.,

Geel, W. C. van. See N. V. Philips Gloeilampenfabr., and Radio Corp. of America. Geer, P. L., and Amco, Inc., vertical glass-annealing lehr, (P.), B., 38. Melting of glass, (P.), B., 441.

Geers, J. F., injection moulding, B., 1369. Geffcken, H. See Radio Corp. of America. Geffcken, W., Kruis, A., and Solana, L., apparent molecular volume of dissolved electrolytes. III. Dilatometer for determination of variation with concentration of apparent and partial mole-

cular volumes, A., I, 333.

Geffeken, W., and Prausnitz, P. H., testing properties of laboratory glasses, and some microchemical glassware, B., 1338.

See also Kruis, A.

Gehant, J. C., planning paints, B., 1086. Gehe, R., discharge [printing] of mode shades on viscosc-acetate rayon mixture fabrics, B., 897.

Géhéniau, J., production of electromagnetic waves by neutrinos, A., I, 163. Impulse moments in L. de Broglie's theory of the photon, A., I, 215.

Gehle, [carrying out] gas analysis in the Orsat apparatus, B., 1002.

Gohlen, H., potassium nitrosodisulphonate, A., I, 576.

Gehm, G., gloss and smoothness [slipperiness] of waxed linoleum floors in relation to external influences and the composition

of the wax, B., 1367.

Gehm, H. W. See Rudolfs, W.

Gehman, H., Kreider, L. C., and Evans, W. L., mechanism of carbohydrate oxidation. XXIII. Alkaline hydrolysis of oligosaccharides, A., II, 51.

Gehman, S. D., and Field, J. E., colloidal structure of rubber in solution, B., 1091.

Sec also Wingfoot Corp.

Gehring, K. See Richter, J. Gehrke, A. See Schmalfuss, H.

Gehrlach, E., change of physical properties of bitumens in preparation of sheet asphalt mixtures, B., 748.

Geib, K. H., rates of exchange reactions of resorcinol and pyrogallol in heavy water, A., I, 622.

Geib, M. N. V. See Schreiber, W. T. Geidel, W., determination of volatile-baso nitrogen in fish meals, B., 82.

See also Grimmer, W. Geiger, G. F., [electroplating] heavy parts [of metals], B., 684.

Geiger, H., and Zeiller, O., spatial distribution of cosmic ultra-radiation, A., I, 341. Geiger, H. I., basic open-hearth process [for steel], B., 918.

Geiger, K., new effect in the glow discharge

in argon, A., I, 385.

Geigy Akt.-Ges., J. R., coloured lacquers and coating compositions, (P.), B., 65. Monoazo-dyes [for acetate silk] insoluble in water, (P.), B., 221. Azodycs [for acetate silk and varnishes], (P.), B., 329. Azo-dyes, (P.), B., 531, 652. Coloured lacquers and filmforming coating compositions, (P.), B., 701. Synthetic tanning agents, (P.), B., 704. Water-soluble derivatives of the indole series [wetting agents], (P.), B., 761. Indulines, (P.), B., 889, 890. Rendering materials mothproof, (P.), B., 1042. Aromatic sulphones and tanning agents, (P.), B., 1175. Monoazo-dyes capable of being chromed on the fibre, (P.), B., 1181. Sulphur dye preparations, (P.), B., 1196. Dyeing of cellulose ester and ether textile materials, (P.), B., 1197. Coating compositions [containing chlorinated rubber], (P.), B., 1243. Amino-acid derivatives, (P.), B., 1315. Disazodyes, (P.), B., 1317.

See also Conzetti, A., and under Geigy See. Anon., J. R.

Geigy Société Anonyme, J. R., tanning agents, (P.), B., 162.

Geilmann, W., and Meyer-Hoissen, O., analysis of coloured glasses. I. Determination of copper, B., 670.

Geilmann, W., and Wrigge, F. W., analytical chemistry of rhenium. XII. Crystal reactions of rhenium trichloride and chlororhenic acid, A., I, 264.

Geisel, determination of dry substance [in coal], B., 637.

Geisler. See Wesly, W.

Geisler, O. See Western Electric Co. Geissen, C. See Rheinmetall-Borsig A.-G.

Werk Borsig Berlin-Tegel.

Geissler, W., and Kleinert, H., adhesion of cut-back bitumens to stones, B., 786. Geissman, T. A. See Standard Oil Co.

Geist, H. H., and Chandlee, G. C., determination of zirconium in steels with n-propylarsinic acid, B., 681.

Geith, \hat{R} ., nutrient content of pasture grasses and its influence on management

of German pastures, B., 615. Gelbach, R. W., and King, G. B., electrometric titration of selenates, A., I, 579.

Gelbart, A. See Dobitschin, D.

Geldbach, A., and Schlötter, M., anodic potential of chromium in asymmetric alternating-current electrolysis. I. II. Interpretation of the results and supplementary experiments, A., I, 84, 188.

Gelder, J. P. van, grinding mill, (P.), B., 3. Gelei, G. See Kocsis, E. A. Gelfenbein, A. A. See Belov, K. P.

Gelgren, E. C., and Menschikova, T. M., measurement of $p_{\rm H}$ with a glass electrodo using a lamp voltmeter, A., I, 332. Continuous automatic control of acidity in electrolytic preparation of persul-

phates, B., 360.

Geller, R. F., and Bunting, E. N., system
PbO-B₂O₃, A., I, 412.

and Creamer, A. S., tale in whiteware, B., 781.

Geller, W., action of amines as inhibitors in solution of pure aluminium in acids,

Gellhorn, E., and Dunn, J. O., undernutrition, starvation, and phagocytosis, A., III, 493. Effect of lack of vitamin-A in the diet on phagocytosispromoting properties of blood-serum, A., III, 493.

See also Lambert, E. H., and Moldavsky, L. F.

Gelman, A. D., ethylene compounds of platinum, A., II, 282.

See also Tscherniaev, I. I. Gelman, I., and Derviz, G., fate of mercury fumes and mercurial compounds in the

organism, A., III, 310. Gelman, R. M. See Koldaev, B. M. Geloso, M., anodic formation of manganese

dioxide. II. Different modes of oxidation, A., I, 90. and Giordano-Orsini, (Mlle.) E., pre-

cipitation of copper sulphate by sodium carbonate, A., I, 256. and Rouillard, (Mlle.) C., anodic form-

ation of manganese dioxide. I., A., I, 90. Gelperin, I. I., and Rips, S. M., construc-

tion of containers for compressed gases,

Gelstharp, F., and Pittsburgh Plate Glass Co., barium crown glass, (P.), B., 672. Gemant, A., and Jackson, W., internal

friction in some solid dielectric materials, A., I, 355.

Gempp, A. See Spath, E.

Genders, R., and Harrison, R., tantalumiron alloys and tantalum steels, B., 46. See also Burden, W. M. Gendler, B. S. See Gaev, I. S.

Geneff, C. N., 3-alkoxy-4-[hydr]oxybenzaldehydes, (P.), B., 421.

General Aniline Works, Inc., and Angermueller, H. P., washing of steam, (P.), B., 1288.

Gen. Asphalte Co., Ltd., Mitchell, M. S., and Luke, F. A. B., coverings for roofs, terraces, and similar surfaces, (P.), B.,

Gen. Cable Corporation. See Aken, J. N.Gen. Chemical Co., and Carter, B. M., treatment of gases [with liquids], (P.), B., 742.

Fowler, T. V., jun., Harkness, A. M., Merriam, H. F., and Carter, B. M., converter, (P.), B., 738.

and Harkness, A. M., sulphur vaporiser [for manufacture of carbon disulphide], (P.), B., 1203.

Harkness, A. M., and Iddings, C., apparatus for purification of carbon disulphide, (P.), B., 416.

and Iddings, C., carbon disulphide, (P.), B., 1171.

and Ingraham, H. O. C., sulphur dioxide, (P.), B., 239.

and Jenks, L. E., vanadium catalyst [for sulphur dioxide oxidation], (P.), B., 1047.

and Joseph, H., catalyst [for sulphur dioxide oxidation], (P.), B., 239.

and Levermore, C. L., phosphoric acids, (P.), B., 436. Phosphates, (P.), B., 1201.

and Merriam, H. F., sulphuric acid, (P.), B., 778. Reduction of sulphur dioxide, (P.), B., 1047.

and Preisman, L., [alkali] phosphates, (P.), B., 134. Phosphates, (P.), B., ì201.

and Silsby, C. F., sulphuric acid, (P.), B., 436.

and Simpson, G. S., purification of [zino chloride] materials contaminated with ammonium salts, (P.), B., 238. Oxalio acid, (P.), B., 1172. and Taylor, G. E., phosphates, (P.), B.,

437.

and Vivian, R. E., phosphoric acid, (P.),

and Wollner, H. J., adsorbent [activated silica gel], (P.), B., 909. Wollner, H. J., and Shinn, J. V., [silica

gel] adsorbent, (P.), B., 237.

Gen. Electric Co., and Alexander, P. P., reduction of refractory oxides, (P.),

Beeker, K., Schröter, K., and Wolff, H., sintered hard metallic alloy, (P.), B.,

and Biggs, L. R., heating element, (P.), B., 990.

and Breadner, R. L., vitreous envelopes, (P.), B., 1343.

Breadner, R. L., and Jenkins, H. G., devices for establishing connexion between two sealed vessels, (P.), B., 739.

and Chapman, C. H., pole shader, (P.), B., 1071.

Charlton, E. E., and Whelan, D. O., electric-discharge device, (P.), B., 1075.

Cheltnam, C. H. W., and Cheltnam, C. H., centrifugal apparatus for separating dust or other solid particles from air and gases, (P.), B., 308. and Clark, Frank M., electrical capacit-

ator, (P.), B., 1230. Clark, Frank M., and Koenig, J. H., electrolytic device, (P.), B., 150.

Gen. Electric Co., and Corson, M. G., surface-hardening of metals by cementation with antimony, (P.), B., 581.

and Devers, P. K., fusing [and drawing] of vitreous material, (P.), B., 38.

and Ferguson, J. S., removal of carbonaceous impurities from hydrogen and other gases, (P.), B., 543.

and Ford, J. B., electrical contact, (P.), B., 583.

and Fowler, T. V., jun., roasting [fine sulphide] orcs, (P.). B., 690.

Fritze, O., and Rüttenauer, A., fabricated glass articles for gaseous electricdischarge lamp, (P.), B., 56. Gascous

electric-discharge lamp, (P.), B., 56.
and Gaidies, G., gaseous electricdischarge device, (P.), B., 803.
Gaidies, G., and Reger, M., gaseous
electric-discharge lamp, (P.), B., 582.

and Germer, E., illumination resembling daylight, (P.), B., 461.

and Hales, G. J., immersion tube-type furnace, (P.), B., 53.

Harlow, E. C. G., and Williams, S. V., annealing and similar heat treatment of metals, (P.), B., 689.

and Harrington, R. H., hardening of

cobalt steel, (P.), B., 800.
and Haskins, C. P., synthetic resin
[from cupreno], (P.), B., 158.
and Jeffkins, A. C., etching of glass,

(P.), B., 1342.

and Jenkins, H. G., electric-discharge lamps, (P.), B., 150. Envelopes coated with luminescent materials adapted to enclose a source of radiation, (P.), B.,

Jenkins, H. G., and Ryde, J. W., means for illumination comprising luminescent material, (P.), B., 461.

Jenkins, I., and Williams, S. V., nitrogen or a nitrogen-hydrogen mixture from

ammonia, (P.), B., 343. and Jesty, L. C., electric-discharge devices, (P.), B., 461.

and Johnson, W. A., apparatus for comparing or measuring the colour of light diffusely reflected from surfaces,

(P.), B., 1231. Johnson, W. A., and Turner, H. C., selenium surfaces, (P.), B., 1226.

and Krefft, H., gaseous electric-discharge

device, (P.), B., 1231.

and Lange, B., measurement of reflexion coefficients, (P.), B., 363. Photometers for measuring illumination, (P.), B., 363.

and Leeds, R. E., [heat treatment in] manufacture of [tungsten] filaments for electric incandescence lamps, (P.), B., 1076.

and Müller, Robert H., electrical insulation [for copper wires], (P.), B., 803.

and Navias, L., sodium-resistant glass,

and Navias, L., sodium-resistant glass, (P.), B., 241. Glass, (P.), B., 241. and Otis, A. N., bell-type annealing furnace, (P.), B., 53. and Partridge, J. H., unstable glasses, (P.), B., 241. Refractory glasses, (P.), B., 346.

and Patent-Treuhand Ges. für elektr.
Glühlamnen m.b.H., luminescent m.b.H., Glühlampen screens [for use with electric-discharge devices], (P.), B., 362. Electric incandescence lamps, (P.), B., 694.

Pirani, M., and Gaidies, G., alkalimetal vapour-resistant glass, (P.), B.,

241.

Gen. Electric Co., and Randall, J. T., electric-discharge devices comprising luminescent materials, (P.), B., 56. Luminescent materials for use in electric-discharge lamps, (P.), B., 150. Electric lamps comprising luminescent materials, (P.), B., 802.

Randall, J. T., and Ryde, J. W., means for illumination comprising luminescent materials, (P.), B., 461.

and Reynolds, N. B., composite glass container [of electric-discharge devices], (P.), B., 56.

and Richards, J., fine[-bore] tubes of alumina and like materials, (P.), B., 673. and Rüttenauer, A., gaseous electric-discharge lamp, (P.), B., 56.

Turner, H. C., and Sherwin, A., [electrical] thermostats, (P.), B., 694.

Uyterhoeven, W., Bruijnes, J., and Verberg, C., gascous electric-discharge lamp devices, (P.), B., 1076.

and Wiegand, E., metallic barium for introduction into electric-discharge devices, (P.), B., 252. and Williams, S. V., annealing furnaces, (P.), B., 356.

and Wright, J. G. E., [alkyd-vinyl] synthetic resins, (P.), B., 700.

See also Brit. Thomson-Houston Co. Gen. Electric Vapor Lamp Co. See Foulke, T. E., and Winninghoff, W. J.

Gen. Engineering Co., Inc., froth-flotation cell, (P.), B., 1288.

Gen. Foods Corporation, and Beach, N. M., semi-soluble and dispersable calcium pectate, (P.), B., 496.

Olsen, A. G., and Stuewer, R., pectin,

(P.), B., 496. Manganese Gen. Corporation. See McCarthy, J. D.

Gen. Motors Corporation, air cleaners, (P.),

and Almen, J. O., testing of lubricants, (P.), B., 521.

See also Bichowsky, F. R., Boegehold, A. L., Fleischer, J., Gayer, F. H., McDorman, P., Martin, E. J., Murray, L. W., Randolph, D. W., and Sanders, W. E.

Gen. Patents, Ltd., ionised gas such as air, (P.), B., 1076.

Gen. Plastics, Inc. See Norton, A. J.

Gen. Plate Co. See Payette, J. A.

Gen. Salt Co., Ltd. See Bierbanm, H. E. Genereaux, R. P., fluid friction in conduits, B., 853. Fluid-flow design methods, B., 853.

Generozov, B. A., and Dorofeev, P. P., determination of silicon in steel and cast iron, B., 563.

Geneslay, G_{-} , action of cupric sulphate and nitrate on pure copper, A., I, 145. Copper carboxydiammine [diammino-carbonato-copper] and its decomposition products with water and with heating, A., I, 145. Corrosion of by magnesium copper chloride solutions in moist air and in an atmosphere of carbon dioxide, A., I, 145. Corrosive action of alkali carbonates and of ammonium carbonate on copper, A., I, 145. Can moulds modify action of copper sulphate on copper? A., I, 145.

See also Guillot, M.

Genevese, F. See Livingston, M. S. Genevois, L. See Espil, L. Geniesse, J. C., Reuter, R., and Atlantic Refining Co., motor fuels, (P.), B., 412.

Génin, G., carton containers for milk, B., 611. Effect of irradiation on the vitamin-A content of condensed milk, B., 611. Automatic manufacture of dried milk, B., 723. World production of casein, B., 834.

Gensamer, M., and Thornburg, V. E., furnace for treating iron in hydrogen at high temperatures, B., 560.

See also Barrett, C. S.

Genseh, $K_{\cdot \cdot}$, ammoniacal lithium nitrato as absorption liquid for refrigerating machines, B., 735.

Gense, R. See Roure, R.

Gensecke, W., and Amer. Lurgi Corp., apparatus for treating [deodorising] oils and fats, (P.), B., 1235.

Gentele, J. G. W., drying of substances in vacuo, (P.), B., 509.
Genter, A. L., coagulation contrasted with

chemical precipitation in [sewage-]sludge digestion, B., 847.

Gentner, F., favourable compression stresses in nitride layers [on steel], B., 446.

Gentner, W., y-radiation emitted from boron on bombardment with rapid protons, A., I, 108. Absorption of γ-radiation by heavy metals as a function of wave-length, A., I, 339. Addition processes with fast protons, A., I, 593.

and Starkiewicz, $J_{\cdot,\cdot}$, variation of absorption of hard y-rays as a function of the atomic number, A., I, 339.

See also Bothe, W.

Geoffroy, R., araban of wheat flour, A., III, 322. Fermentation balance sheet in bread-making, B., 178.

and Labour, G., factor-Z in wheat flour, A., III, 355. Application of the Javillier and Djelatides technique for determination of proteins to some industrial flours, B., 178.

George, H., and Lambert, R., dissociation

of zircon, A., I, 334.
George, P. W. See Hellstrand, G. A.
George, S. W., and Robertson, A., synthesis of rotenone and its derivatives. XV. Structure of toxicarol, A., II, 465.

George, W. H., sensitivity variation of X-ray photographic films, A., I, 472. Georges, L. W. See Wolfrom, M. L.

Georgescu, (Mlle.) E. Sce Maxim, N. Georgescu, I. D. See Cella, C., and Nitzescu, I. I.

Georgescu, N. I., regeneration of mineral

aviation [lubricating] oils, B., 753. Georgeson, E. H. M. See Coward, H. F. Georgi, C. D. V., ether extract of Tephrosia vogelii, B., 1254. Toxic content of Haiari or cubé root, B., 1390.

Lambourne, J., and Teik, G. L., variations in toxicity of some races of Derris elliptica, B., 959. and Teik, G. L., preparation of derris

root for export; evaluation, B., 87. Determination of rotenone in derris root, B., 392.

See also Dennett, J. H.

Georgi, E. A. See Lorand, E. J.

Georgievskaja, L. M., nature of union of sodium and potassium in the grey matter of the brain, A., III, 198.

Georgobiani, M. See Tananaev, I. V. Gephart, F. T. See Wallis, E. S. Gephart, V., mixing device, (P.), B., 305.

Gérard, P., renal excretion of acid dyes in Astacus fluviatilis, A., III, 349.

Gerard, P. J. See Mouchel & Partners, R, B.

Gerard, R. W. See Cohen, R. A.

Gerasimov, J. I., evaluation of activity of metals in melts from the equilibrium coefficient, A., I, 372. Thermal dissociation of bismuth sulphide, A., I, 463. Pirtzchalov, N. I., and Stepin, V. V.,

thermal dissociation of higher sulphides of nickel, A., I, 136.

Gerasimov, P. N., changes in chemical composition of peat during storage in stacks, B., 862.

Gerbaux, J. See Nicaud, P.

Gerber, A. C., development of a successful periodic humidity dryer for grogged ware, B., 345.

Gerber, H., effect of thickening agents on depth of colour in printing with vat dyes, B., 538. Substitution of glycerin by urea, hexamethylenetetramine, sodium phosphate, etc., in cloth printing, B., 897. Urea as an auxiliary product in textile printing, B., 1196.

Gerbers Co., m.b.H., N., organisation of a

dairy laboratory, B., 1124.

Gerbes, W., ionising effect of cathode rays in different gases and gas mixtures, A., I. 550.

Gerchick, E. See Sobel, A. E.

Gerding, H., clastic properties of sulphur trioxide, A., I, 291.

and Gerding-Kroon, R., complexity of solid state of sulphur trioxide and

other substances, A., I, 576. and Moerman, N. F., Raman spectrum of ice-like (y) and low-melting asbestoslike (β) form of sulphur trioxide, A., I, 218.

and Nijveld, W. J., Raman spectrum of sulphur dioxide in different states, A., I, 598.

spectrum of sulphur trioxide, A., I, 218. Nijveld, W. J., and Muller, G. J., Raman

Gerding-Kroon, R. See Gerding, H.

Gerdum, E. See Giesecke, F.

Gerecs, A. See Zemplén, G. Gerencsér, N., "Dynarsan Egger," a new agent against syphilis, A., III, 15.

Gerendas, M., and Varga, E., spectrochemical investigations in the isoquinoline series, A., II, 467.

See also Kiss, A. von, and Lajos, S.

Gerez, L. See Bickel, A.

Gerhardt, K. See Niemczycki, S. Gerhardt, O., synthesis of jasmone, B., 1308.

Gerhold, C. G. See Universal Oil Products

Gericke, A. M., Spuy, M. J. van der, and Stead, H. A. J., egg structure, its quality and storage, B., 1262.
Gericke, W. F., "hydroponics"—crop

production in liquid culture media, B.,

Gerke, F. K., determination of carbon monoxide and dioxide in ferrous alloys, B., 681.

and Kardakova, Z. I., uncompensated electro-titration of manganese, chromium, vanadium, molybdenum, and titanium [in steels], B., 681. Analysis of alloys for their basic components, B., 1066.

and Liubomirskaja, N. V., determination of alumina in steels, using a mercury cathode, B., 564. Determination of phosphorus, aluminium, and beryllium in bronzes, by electrolysis with a mercury cathode, B., 1064.

Gerke, O. See Kosmath, W.

Gerlach, replenishment of soil-nutrient supplies for plants, B., 1250.

Gerlach, E., mixing process in bituminous road construction, B., 348.

Gerlach, W., theory and experiment in exact science, A., I, 153. Precipitation-hardening of nickel-beryllium alloys, A., I, 559. Hardening of goldnickel alloys, B., 925.

and Hammer, K., changes in electrical resistance during hardening of beryll-

ium-nickel alloys, B., 1353. and Rollwagen, W., new photometric principle for quantitative spectral analysis, A., I, 528. Chemical spectral analysis, B., 51.

Gerlaugh, P., Hunt, C. H., and Edgington, B. H., effect of alkalinisation of drinking water on the $p_{\rm H}$ of jugular blood of feeder cattle, A., Ill, 373. Gerling, E. K. See Chlopin, V. G.

Gerloff, U., composition of fatty oils in

different parts of plants, A., III, 244. and Oestermann, H., hydrocyanic acid content of linseed, B., 1079.

See also Bauer, K. H. Germain, R., from pearl essence to artificial pearls, B., 812.

Germain, (Mile.) Y. See Quelet, R. German, \hat{B} ., and Wyman, \hat{J} ., $\hat{j}un$., titration curves of oxygenated and reduced hæmoglobin, A., Ill, 111.

German, S. See Lozinski, N.

German, S. L., sorption of lime from solution by quartzites, A., I, 299. Determination of cohesivity of Dinas masses, and their suitability for moulding, B., 1052.

German, W. L., and Vogel, A. I., new series of buffer mixtures covering the $p_{\rm H}$ range 1—6, A., I, 332. Dissociation constants of organic acids. XVIII. Cyclic 1:I-diacetic acids, A.,

Vogel, A. I., and Jeffery, G. H., thermodynamic primary and secondary dissociation constants of maleic and fumaric acids, A., I, 29. Dissociation constants of organic acids. XIX. Unsaturated acids, A., I, 565.

See also ∇ ogel, A. I.German Coke Oven Research Committee, determination of phosphorus in coal and coke, B., 311. Determination of benzol

in coke-oven gas, B., 639. Germann, A. F. O. See Barnett, H. M. Germer, E. See Brit. Thomson-Houston

Co., and Gen. Electric Co. Germer, L. H., strain in galena crystals

produced by abrasion, A., I, 605. and Storks, K. H., structure of Langmuir-Blodgett films of stearic acid, A., I, 605.

See also Storks, K. H. Gernelle, H. M. O. See Gernelle, H. V. J. Gernelle, H. V. J., and Gernelle, H. M. O., crushing bodies for ball and tube mills, (P.), B., 631.

Gernert, W. B., native grass behaviour as affected by periodic clipping, B.,

Gernet, D. V. See Adadurov, I. E.

Gernet, E. V., and Diakov, K. K., silver oxides used in cæsium photo-electric cells, B., 54.

Gernez, C., rate of sedimentation of erythrocytes; Vernes' reaction, induced hyperthermia, and medicinal injections in man, A., III, 449. See also Ramon, G.

Gerngross, O., and Callo, A., translucent material impermeable to ultra-violet rays, (P.), B., 255.

Gerö, L., perturbations in the band spectra of CS, CO+, and N₂, A., I, 215.

Herzberg, G., and Schmid, R., Cameron bands (${}^{3}\text{II}$ — ${}^{1}\Sigma$) of carbon monoxide, A., I, 596.

See also Schmid, R.

Gerrard, F., storage and preservation [of foods]; B., 977.

Gerrard, W., Kenyon, J., and Phillips, H., replacement of the hydroxyl group of ethyl (+)lactate by halogens and the molecular dissymmetry of derivatives of ethyl lactate which contain the sulphin

group, A., II, 84.
Gerretsen, F. C., manganese deficiency of oats and its relation to soil bacteria, B., 822.

Gerritsen, A. N. See De Haas, W. J. Gerry, H. T. See Keyes, F. G.

Gerschenovitsch, M. S., Belova, R. S., and Samartzeva, I. A., determination of allylthiocarbimide in air, A., II,

Daletzki, G. F., and Kotelkov, N. Z., selective analysis of carbon monoxide, hydrogen, and methane, B., 1154.

Gerschman, R. Sec Foglia, V. G., Houssay, B. A., and Marenzi, A. D.

Gerschson, A. I., physico-chemical foundations of moisture determination, B., 280. Physical chemistry of surface phenomena and disperse systems in bread-making; determination of the dispersity of flour and starch by uninter-rupted sedimentation, B., 721. Surface properties of flour colloids; examination of the structure of flour by sedimentometrie analysis (by stabilisation), B.,

Gerschun, A.A., illumination of workshops in the photochemical industry, B., 292.

Gerschuns, A. L., metallographic testing of electrolytic coatings, B., 1068.

Gerschzon, G. I., and Lastovski, R. P., separation of mixed aromatic amines by

means of phosgene, B., 324. Gersdorff, C. E. F. See Jones, D. B. Gersdorff, W. A., relative toxicity of cresols as demonstrated by tests with Carassius auratus, A., III, 308. Relative toxic

action of phenol and phenylmercaptan, with goldfish as the test animal, B., 482.

Gershill, B. See Isaac, W. E.

Gershinowitz, H., transfer of energy in molecular systems, A., I, 116.

and Wilson, E. B., jun., infra-red absorption spectrum of keten, A., I,

Gerstein, H. H., safe-handling of chlorine and ammonia in water-works plants, B., 505.

Gerstner, and Walther, J., sized rayon threads, B., 898.

Gerth, G., extraction of felspar by froth flotation, B., 548. Purification of the important ceramic raw materials, B., 1051.

and Baumgarten, A., use of "filter stones" in froth flotation apparatus, B., 196.

Gerth, M. M. See Near, H. B.

Gertler, H., presence of histidine in human

urine, A., III, 378. Gertler, S. E., and Stein, H. I., [surface-] hardening [sheet] metals, (P.), B., 580. Gertrude, M. T., claboration of carbon-aceous matter by plants in an aqueous medium, A., III, 80. Action of aqueous medium on nitrogen and phosphorus nutrition of a herbaceous plant, A., III, 106. Morphogenic action of an aqueous medium on plants, A., III, 284.

Gertschuk, M. P., synthesis of α-phenyl-paraconic acids, A., II, 291.

and Katznelson, M. M., anhydrides of naphthenic acids, A., II, 148.

Gertzikov, G. A., and Bilenkin, A. M., automatic calorimeter for determining the calorific value of gases, B., 313. Gerver, J. See Versluys, J.

Geschke, E. Sec Meerwein, H. Geselle, P. See Ruff, O.

Gesellschaft für Linde's Eismaschinen Akt.-Ges., gas mixtures rich in hydrogen, (P.), B., 208. Drying of liquids, in particular in determining the solid content thereof, (P.), B., 306. Separation of gaseous mixtures by washing, (P.), B., 308. Compensating fluctuations in temperature or composition of crude gas in separation of gaseous mixtures by rectification, (P.), B., 512. Solid carbon dioxide of high density, (P.), B., 668. Separation of acetylene from mixtures with ethylene and ethane, (P.), B., 1019. and Krause, G. A., high-quality beverage

spirits, (P.), B., 178. Resolution of solutions or liquid mixtures into their constituents by cooling and crystallisation, (P.), B., 634.

Ges. zur Verwertung Fauth'scher Patente m.b.H., dehydration of water-containing or water- and oil-containing materials, (P.), B., 367. Comminuting apparatus, (P.), B., 391. Comminuting and washing flesh, (P.), B., 391. Extraction of vegetable oils, (P.), B., 465.

Geslin, H., evaporating power of air and humidity of soil, B., 376.

Gessler, A. E. See Interchemical Corp.,

and Internat. Printing Ink Corp.

Gesteau, P., electrically heated Thiele's [m.p.] tube, A., I, 377. Apparatus for producing pure hydrogen [for hydrogen electrodes], A., I, 429. Thermo-regulator, A., I, 534. Determination of the radioactivity of drugs, B., 1130.

See also Lormand, C.

Getman, F. H., cryoscopic studies of solutions in formamide. II., A., I, 77. Freezing points of the system p-dioxantert.-butyl alcohol, A., I, 617.

Gettens, R. J., polymerised vinyl acetate and related compounds in restoration of objects of art, B., 154.

Getz, C. A. See Smith, G. Frederick.

Getz, I. F., improvements in technique

of gas analysis, B., 436. Getzov, B. B., electrolytic etching [steel] micro- and macro-sections, B.,

Gevaert Photo Producten Naamlooze Vennootschap, stabilisation of cellulose esters, (P.), B., 429. Manufacture of dyes, and sensitising of photographic silver halide emulsions, (P.), B., 888. Carbocyanine dyes for sensitising photographic emulsions, (P.), B., 1031. Dyes for use in photographic silver halide emulsions, (P.), B., 1275.

and Vankeirsbilck, N., sensitising of photographic halogen silver emulsions, (P.), B., 1276.

Gewerkschaft Sophia-Jacoba, apparatus for wet concentration of coal by float-and-sink process, using heavy separating liquid, (P.), B., 207.

See also De Vooys, G. J.

Gewerkschaft M. Stinnes, electrode carbon and ash-free coking products from coals, (P.), B., 13. Obtaining extracts from coal and peat, (P.), B., 409. Coal extracts, (P.), B., 643. Gex, (Mlle.) M. See Boe, J.

Geyer, J. C., effect of industrial wastes on sewage-plant operation, B., 1413. and Chang, H. L., chemicals used for

cleaning rapid sand filters, 848.

Geyer, M., vital staining of the reticuloendothelial system, A., III, 192.

Géza, L. See Hubert & Sigmund Stahl- & Metallwarenfabr.

Ghaffar, A., diffusion of lactic acid, and iodide, in voluntary muscles of the frog, A., III, 175.

Ghalioungui, P., and Zell, F., action of di-iodotyrosine, iodine, and iodoglidin on the cholesteroI content of the blood, A., III, 308.

See also Fikri, M. M. Ghani, M. O. See Basu, K. P. Ghantus, M. See Kerr, S. E.

Ghate, (Miss) I. See Limaye, D. B.

Ghigi, (Signa.) E., demolition of isodibenzanthrone (isoviolanthrone) by oxidation with an alkaline solution of potassium permanganate, A., II, 157. Synthesis of 1:2-3:4-dibenzoxanthrone, A., II, 257.

See also Charrier, G.

Ghimicescu, G., micro-determination of boric acid in beer, and proportions in natural beers, B., 606. Colorimetric micro-determination of alcohol in beer, B., 1258. Micro-titration of total reducing power of wine, and determination of calorific index or total alimentary power of wine, B., 1258. Value of undetermined content of wine, B., 1258.

See also Sumuleanu, C.

Ghosal, S. C. See Farmer, E. H. Ghose, A. K. See Lottermoser, A.

Ghose, T. P., and Krishna, S., constituents of the leaves of Vitex negundo, A., III,

Ghosh, A. N. See Ray, P.

Ghosh, B. See Guha, B. C. Ghosh, B. N., adsorption of antigens by antibodies or vice versa. I. and II., A., III, 294.

and De, S. S., enzymes in snake venom. II. Their action on native proteins, on peptones, and on activity of trypsin, A., III, 180. Migration of the toxic constituents of cobra (Naja naja) venom at various p_H in an electric

field, A., III, 458. and Ray, N. N., adsorption of antigens by antibodies or vice versa. III. Effect of electrolytes on rate of flocculation of toxin-antitoxin mixtures of diphtheria and tetanus, A., III, 338.

See also Prosad, K. Ghosh, J. C., Bhattacharyya, S. K., and Narasimhamurthi, M. L., photobromination of acetylene dichloride in the gascous phase, A., I, 627.

and Char, T. L. R., oxidation-reduction potential of ascorbic acid, A., I, 246.

Ghosh, J. C., and Kar, B. C., oxidation of thiol compounds by hydrogen peroxide in presence of inorganic catalysts. II. Oxidation of cystine by means of hydrogen peroxide in presence of vanadic acid sol, A., II, 403.

and Rakshit, P. C., dissociation constants of ascorbic acid, A., I, 184. Autoxidation of ascorbic acid and its inhibition by sulphur compounds, A., III, 104.

Ghosh, N. N. See Chopra, R. N. Ghosh, R., new synthesis of caronic acid, A., II, 499.

Ghosh, Sudhamoy. See Chopra, R. N. Ghosh, Sudhansu. See Sen, H. K.

Ghosh, S. K. See Bose, P. K.
Ghosh, T. N., quinoline derivatives. I.
and II., A., II, 309, 393. Quinazolines. I., A., II, 521.

Giacalone, A., substances containing the β -ionone ring; action of organomagnesium compounds on β -ionone, A., II, 502. Syntheses of pyrazolone derivatives. I. Butyl- and isobutylantipyrine, A., II, 520.

and Indovina, R., reaction between iodine and various metallic oxides. Magnesium oxide in aqueous media. II. Magnesium and calcium oxides in anhydrous media and in the dry condition, A., I, 194. Bearing of the reaction between iodine, alkali, and magnesium salts on analytical pro-

cesses, A., I, 199. and Russo, F., co-precipitation of ferric sulphate with barium sulphate and means for preventing it, A., I, 44.

Giacomello, \hat{G} . See Kratky, O., and Ruzicka, L.

Giammarino, P., determination and detection of fluoride ion with lanthanum, A.,

Gianferrara, S. See Ajello, T.

Giannini & Co., Inc., G. U., increasing the efficiency of nuclear reactions and products thereof; [radioactive substances], (P.), B., 1231.

Giauque, W. F., and Archibald, R. C., entropy of water from third law of

thermodynamics; dissociation pressure and calorimetric heat of reaction $Mg(OH)_2 = MgO + H_2O$; heat capacities of magnesium hydroxide and oxide from 20° to 300° abs., A., I, 242.

and Egan, C. J., heat capacity and vapour pressure of solid carbon dioxide; heat of sublimation and thermodynamic and spectroscopic values of the entropy of carbon dioxide, A., I, 123.

Stout, J. W., and Clark, C. W., decrease in the electrical resistance of gold with a magnetic field at Iow temperatures, A., I, 450.

See also Kemp, J. D., Overstreet, R., and Stephenson, C. C.

Gibaylo, K., and Umschweif, B., inorganic phosphorus compound in yeast and composition of adenosine polyphosphoric acids, A., III, 271.

See also Umschweif, B.

Gibbard, J., treatment of water and beverages with silver, B., 625.

Gibbons, J. T., and Bancroft & Sons Co.,

J., fabric finishing, (P.), B., 1197. Gibbons, N. E., salt fish. I. Bacteria associated with reddening, B., 613. See also Beatty, S. A.

Gibbons, P. A., and Cotton, F. H., semi-ebonite. II., B., 815.

Gibbons, T. P. Sco Ryan, J. H. Gibbons, W. E. Sco Gibbons Bros., Ltd.

Gibbons Brothers, Ltd., and Gibbons, W. E., tunnel kilns, (P.), B., 441.

Gibbs, A. See Reynolds, D. L.

Gibbs, A.J. Sco Rand, S.J.Gibbs, E.M. See Henry, T.A.Gibbs, G.E. See Chaikoff, I.L.

Gibbs, J. G., pelargonium rust, B., 604.

Gibbs, L. T. See Riney, A. H. Gibbs, R. C., and Williams, R. C., e/mratio as determined from the interval between corresponding components of H_{a} - and D_{a} -lines, A., I, 546.

See also Dorr-Oliver Co., and Williams,

Gibbs Manufacturing Co. See Crites, B. O. Gibert, P., and Durand-Gasselin, A., perchlorates and the lyotropic scries, A., I, 80.

Gibert, R., 4:4'-organo-magnesium derivatives of diphenyl; catalytic action of magnesium iodide, A., II, 436.

Gibney, R. B., and Dole, M., photo-voltaic effect for sodium, A., I, 32.

See also Dole, M.

Gibson, A., mosquito suppression in Canada, 1934, B., 504.

Gibson, A. J., natural resins and shellac, B., 588.

Gibson, C. S., thin gold films, A., I, 584. Constitution of aurous compounds: gold mirrors, A., I, 602. See also Burawoy, A.

Gibson, D. T., and London, J. D., exchange

of sulphonyl groups, A., II, 183. Gibson, G. E., Seaborg, G. T., and Grahame, D. C., interaction of fast neutrons with lead, A., J, 211.

See also Grahame, D. C., and Seaborg,

Gibson, G. H., water purification, (P.), B., 1288.

Gibson, G. W., fertilisation of bulbs, B., 480. Gibson, L. A., cream grading, B., 612.

Gibson, R. E., compressions of solutions of salts in water, glycol, and methanol, A., I, 513.

and Kincaid, J. F., apparent volumes and thermal expansions of salts in aqueous solution between 20° and 40° A., I. 126. Apparent volumes and thermal expansions of salts in glycol and methyl alcohol, A., I, 237. Seo also Adams, L. H.

Gibson, R.O. See Imperial Chem. Industries. Gicklhorn, J., simple micro-method for determining sp. gr. of liquids and solid bodies; (limits and error of evaluation), A., I. 379. Path of urea in the kidney of Salamandra maculosa, Laur., A., III, 261.

Gidvani, B. See Bhattacharya, R. Giedosz, B. See Elmer, A. W.

Gielessen, J. See Grüneisen, E. Giertz, J. W. See Leatherock, L. E.

Giertz-Hedström, S., retention of water by cement, B., 675.

Giese, A. C., and Leighton, P. A., phosphorescence of cells and cell products, A., III, 253.

Giese, L. See Hempel, J. Giesecke, F., and Schmalfuss, K., comparison of effect of calcium cyanamide with other nitrogenous fertilisers on crop yields and on nitrogen transformations in soil, B., 270.

Schmalfuss, K., and Gerdum, E., physiology and nutrition of flax in respect of fibre and oil production. II., B., 1253.

Gieseking, J. E., and Jenny, H., behaviour of multivalent cations in base exchange [of clays], B., 165.

and Snider, H. J., determination of potassium in silicates and soils; lowmelting alkali carbonate flux, B., 706.

Gietz, K. See Sturm, A. Giffen, H. J. van, examination of stannoxyl tablets and similar preparations; determination of tin, stannous oxide, and stannic oxide in tablets, B., 496. Determination of volatile oil content of vegetable materials, B., 980. Determination of essential oils in vegetable materials, B., 1133. Determination of artificial mustard oil in Spiritus sinapis, B., 1133. and Bronkhurst, W. A. van, decon-

tamination of streets and spaces contaminated with mustard gas, B., 396.

Gifford, R. D., clarification of polluted water with special reference to colliery waste and sewage, B., 734.

Gigante, D. Seo Caglioti, V. Gil, J. C., detection of nitrous and nitric acids in drinking waters, B., 93.

Gilard, P., Dubrnl, L., and Jamar, F., determination of iron in sands by spectrographic method, B., 136.

Gilbert, A. H., Merdler, L. R., Tingley, G. R., and Baird Television, cathode-ray tubes, etc., (P.), B., 583.

Gilbert, A. W. See Braddick, H. J.

Gilbert, B. E., normal crops and supply of available soil manganese, B., 273.

and Pember, F. R., availability of ammoniated superphosphate and various unusual phosphatic carriers by pot tests, B., 270. Economical amounts of sodium nitrate to apply for growth of tomatoes in greenhouses, B., 273.

See also Krausche, K. K. Gilbert, C. G., and Choate, P. C., reacting caustic lime with gypsum, (P.), B., 36. and Research Corp., spherulising fusible pulverisable filler material, (P.), B., 631. Cleaning composition, (P.), B., 697.

See also Briggs, S. W.

Gilbert, C. S. See Beath, O. A. Gilbert, C. W., Smith, Cyril L., and Fremlin, J. H., attempt to detect disintegration of the neutron, A., I, 340.

Gilbert, E. C. See Frey, P. R., and Stark, J. B.

Gilbert, E. E. See Donleavy, J. J. Gilbert, F. B. See Dwyer, F. W.

Gilbert, H. N. See Du Pont de Nemours & Co., E. I.

Gilbert, R. W., potentiometric balancing and indicating apparatus, (P.), B., 149. Gilbert, T. M., Cutler-Hammer thermeter, A., 747.

Gilbert, W., cooling of rotary [cement] clinker, B., 1054.

Gilbert, W. V., prevention of corrosion [of ferrous metals], (P.), B., 249. Preparation of metal surfaces for painting, B., 699.

Gilby Wire Co. See Marino, A. J. Gildea, E. F. See Man, E. B. Gildemeister, E., lysozyme, A., III, 489.

Gildovskaja, Z. S. See Sklovskaja, O. M. Giles, A. W., and Jones, A. M., concretions

in the Fayetteville shale, A., I, 383. Giles, C. H. See Imperial Chem. Industries. Giles, W. R. See Pasternack, R.

Gilfillan, E. S., jun., and MacNeille, S. N., induction pump for liquid mercury, A., I. 153.

Gilfillan, F. A., and Merritt, J. R., thymol derivatives of possible medicinal value, A., II, 14.

Giliberti, P., elimination of phosphate and renal phosphatase activity following unilateral nephrectomy, A., III, 462.

Gilkinson, G. F., prechlorination with ammonia in a turbid water supply, B., 1414.

Gill, A. B. See Ravdin, I. S.

Gill, A. F. See Pitt, N. P.
Gill, A. H., and Gill Corp., treatment [lubrication] of textile fibres, (P.), B., 27. [Oiling] treatment of textile fibres, (P.), B., 1330.

Gill, A. M. See Bennett, T. I.

Gill, C. H., affording protection against toxic gases, etc., (P.), B., 94.

Gill, E. T., and Goodacre, R., fatigue properties of patented steel wires. III. Effect of low-temperature heat treatment on decarburised wires, B., 562.

Gill, F. E., and Davenport Eng. Co., spray producers particularly for use in coolingtowers or structures for cooling water and other liquids, (P.), B., 1287.

Gill, L. O., and Staley Manufg. Co., A. E., treatment of soya beans, (P.), B., 85.

Gill, P. H., and Gill Corp., ink-transfer media, (P.), B., 471.

Gill Corporation. See Gill, A. H., and Gill, P. H.

Gillam, A. E., and El Ridi, M. S., carotene of milk-fat (butter), A., III, 153. El Ridi, M. S., and Kon, S. K., iso-

merisation of carotenes by chromatographic adsorption. II. neo-α-Carotene, A., II, 405.

Heilbron, I. M., Lederer, E. A., and Rosanova, V., differences in chromogenic properties of feed and chromogenic properties of feed and control of the control of the chromogenic properties of feed and chromogenic properties of feed and control of the chromogenic properties of feed and chromogenic properties of feed and chromogenic properties of feed and chromogenic properties of feed and chromogenic properties of the chromogeni

genic properties of fresh-water and marine fish-liver oils, A., III, 404.

Henry, K. M., and Kon, S. K., milk and nutrition. VI. Effect of pasteurisation on vitamin-A and carotene content of milk, B., 609.

See also Heilbron, I. M., and Rowe, F. M. Gillespie, B. See Reyerson, L. H. Gillespie, L. J., and Fraser, L. H. D.,

normal vapour pressure of crystalline iodine, A., I, 22.

and Galstaun, L. S., palladium-hydrogen equilibrium and new palladium hydrides, A., I, 136.
Gillespie, R. W. H., and Rettger, L. F.,

oxidation-reduction potentials of certain anaërobic and facultative anaërobic bacteria. I. E_h : p_H relationship; double reversion of potential during apparent logarithmic phase. II. Differentiation of Lactobacilli of intestinal and buccal origin, A., III, 357.

Gillespie, W. See Manlove, Alliott & Co. Gillespy, T. G., growth of mixed organisms in canned vegetables, B., 1126.

Gillet, A., Criegee and Grignard reactions, A., II, 318. Solution of bituminous

coals in heavy oils, B., 103.
Gillett, H. W. See Kinnear, H. B. Gillette, E. P., and Gillette Res. Corp.,

burning of limestone with recovery of carbon dioxide, (P.), B., 779. Gas generator, (P.), B., 1300.

Gillette Research Corporation. See Gillette, E. P.

Gillette Safety Razor Co. See Stargardter,

Gillies, J. F., and Black, J. V., effects of oxidation and moisture on electrical characteristics of transformer oil, B., 317.

Gillies, M. See Borsche, W.

Gillis, J., and Eeckhout, J., ionic exchange produced by addition of nitrates of thorium, hexol, and cerium to the negative sol of silver iodide, A., I, 80. Gillitzer, G., formation of metal enrich-

ments in mid-German copper schists,

A., I, 155.

Gillo, L. See Zunz, E.

Gillord Corporation, spraying of molten metal, (P.), B., 1225.

Gilluly, J., water content of magmas, A., I, 383.

Gillum, H. L., and Okey, R., effect of quantitative underfeeding and vitamin-A deficiency on tissue lipins of rats fed diets low in cholesterol, A., III, 260.

See also Okey, R.

Gilman, A., and Goodman, L., pituitrin

anæmia, A., III, 401.

Gilman, G., urinary proteins: appearance of kidney protein in urine of cases of chronic glomerular nephritis, A., III, 461.

Gilman, H., and Bailie, J. C., relative reactivities of organometallic compounds. XVII. Azo-linking, A., II,

and Nelson, J. F., relative reactivities of organometallic compounds. XVI. Detection of the SH group, A., II, 359.

and Young, R. V., relative reactivities of organometallic compounds. XV. Organoalkali compounds, A., II, 221.

See also Werkman, Č. H.

Gilmore, A. E. See Bergstrom, F. W. Gilmore, B. H., prevention of calcium deposits in process waters; relative value of sodium metaphosphate and pyrophosphate, B., 985.

Gilmore, R. E., and Nicolls, J. H. H., significance of friability and size stability tests on coal, B., 1151.

See also Warren, T. E.

Gils, G. E. van, and Krnyt, H. R., technique of ultramicro-electrophoresis, A., I, 50.

See also Kruyt, H. R.

Gilson, O., variations in blood-urea and chloride during obstruction of the small intestine in the dog, A., III, 195.

Gilta, M. G., crystalline form of "tryparsamide" and of related compounds, A., I, 604. Crystallographic constants [of substituted phenois], A., I, 604. Gimingham, C. T., and Newton, H. C. F.,

poison bait for slugs, B., 827.

Gimmelman, G., Neuman, M. B., and Sokov, P., effect of nitrogen peroxide and methyl nitrite on spentaneous inflammation of ethane and oxygen, A., I, 190. Gimpelevitsch, E. See Kozlov, N.

Gindin, L. G., and Ambarzumjan, R. S., corrosion of metals by non-electrolytes. III. Action of cracked petrol on magnesium, aluminium, and aluminium alloys. IV. Action of cracked petrol on steels. V. Action of cracked

petrol on copper and brass, B., 794.

Mirlis, D. I., and Schemjakin, F. M.,

linear corrosion of metals. I. Selective corrosion of metals on three-phase

boundaries, A., I, 319.

Torsuev, I. I., and Ambarzumjan, R. S., corrosion of metals by non-electrolytes. II., B., 144.

Torsuev, I. I., and Kasakova, V. A., behaviour towards metals of solutions of sulphur and a range of organic sulphur compounds in saturated hydrocarbons, B., 44.

Ginieis, and Corler, butyric acid content of milk, B., 179.

Ginkel, J. G. van, graphical representation of Ostwald-Arrhenius and Kohlrausch-Debye-Hückel [conductivity] equations, A., Ĭ, 244.

Ginn, W. W., and Chem. Novelties Corp., soya-bean phosphatides, (P.), B., 185. Ginnings, D. G. See Osborne, N. F.

Ginnings, P. M., and Baum, R., aqueous solubilities of isomeric pentanols, A., I. 407.

Ginns, D. W., mechanical properties of some metals and alloys broken at ultrahigh speeds, B., 927.

Gino, T. L., colorimetric determination of volume of circulating blood; use of Congo-red for determining plasma/blood ratio and circulatory plasma, A., III, 249. Ginsberg, B. See Bahlke, W. H.

Ginsberg, H., electrolytic metal coatings on aluminium and its alloys by the " Elytal" process, B., 1223.

Ginsberg, J. E., acid in blood as a source of diseases of the skin, A., III, 461.

Ginsburg, J. M., larvicides: temporary protection from adult mosquitoes in limited areas, B., 504. Home-made oil emulsions for orchard spraying, B., 711.

See also Heal, R. E. Ginsburg, L. B. See Jolson, L. M., and Lurie, J. J.
Ginsburg, N. See Randall, H. M.
Ginsburg-Karagitscheva, T. L., cause of

low sulphate content of oil[-well] water, B., 203.

Ginstling, A. M., contact oxidation of sulphur dioxide to sulphur trioxide under pressure, B., 906.

Ginzburg, M. Sec Goldstein, B. Ginzburg, M. L. See Vuigovski, G. V.

Ginzburg, Z., and Dereganskaja, A., determination of mercaptobenzthiazole in rubber mixtures, B., 66.

Gioglia, L., hormone of pregnancy urine and cholesterolæmia, A., III, 150.

Giolitti, F., aluminium telephone wire, B., 1222. Rapid corrosion tests [for aluminium alloys], B., 1223.

Gion, L. P. R. See Chovin, P. E. M., and Dubrisay, R.

Giordani, C., petrol substitutes, B. 869. Giordano-Orsini, (Mlle.) E. See Geloso, M. Giovanardi, A., viantigen of B. typhosus. V Action of formaldehyde. VI. Active

and passive immunity, A., III, 251. Giragossintz, G., Davidson, C., and Kirk, P. L., micro-determination of bloodsugar by ceric sulphate titration, A., III,

Giraitis, A. P., and Bullock, J. L., reactions of cyclohexanone with diazoethane, A., II, 292.

Giral, F., characteristic lipochromes of fluorescent bacteria, A., III, 145.

Girard, A., Ray, A., and Richard, G., antimicrobial action of some aromatic compounds, A., III, 436.

Girard, M., influence of replacement of a β-hydrogen by methyl in a-hydroxy-γphenyl- $\Delta \beta$ -butenoic acid, A., II, 290.

Girard, P., and Abadie, P., molecular interactions and the structure of liquids, A., I, 285.

Girdler Corporation, primary lower aliphatic amino-alcohols, (P.), B., 1173. See also Bottoms, \hat{R} , \hat{R} ,

Girenchin, B. K., influence of elastic tension on magneto-striction, A., I, 227.

Giri, K. V., plant phosphatases. I. Phosphatase of germinated soya bean (Glycine hispida), A., III, 142. Magnesium activation of tissue phosphatases, A., III, 431. Stabilisation of vitamin-C by pyrophosphate, A., III,

and Bhargava, P.N., detection of adulteration in food-stuffs, B., 837. Differentiation of oils by enzymic hydrolysis, B., 1081.

and Sreenivasan, A., amylase system of rice grain during ripening and germination, A., III, 142.

See also Bhargava, P. N., and Dastur, N. N.

Girndt, C., and Huhn, O., effect of antipyretics on the action of soporifics, A., ÎİI, 25.

Giroud, A., Giroud, P., Ratsimamanga, R., and Rabinowicz, M., anti-anaphylactic power of ascorbic acid in guinea-pigs: effect of the diet and ascorbic acid content on the sensitivity of the organism, A., III, 104.

and Leblond, C. P., histological study of renal elimination of ascorbic acid, A.,

Leblond, C. P., Ratsimamanga, R., and Rabinowicz, M., ascorbic acid in the cell and its detection, A., III, 155.

Ratsimamanga, R., Leblond, C. P., Rabinowicz, M., and Drieux, H., distribution of ascorbic acid in the organism, A., III, 405.

Ratsimamanga, R., Machebœuf, M. A., Cheftel, H., and Thuillot, (Mile.) M. L., antiscorbutic value of preserved foods, A., III, 45. Antiscorbutic value of canned foods, B., 724.

Ratsimamanga, R., Rabinowicz, M., and Chalopin, H., ascorbic acid in the pituitary gland, A., III, 104.

Ratsimamanga, R., Rabinowicz, M., Ruiz, A. S., and Cesa, I., synthesis of ascorbic acid by the human feetus, A., III, 78.

See also Wollman, E.

Giroud, P. See Giroud, A. Giroux, J., filtration versus clarification of milk, B., 609.

Giršavičius, J. V., and Cheifetz, P. A., mechanism of action of glyoxalase, A., III, 139. Dependence of reaction of combination of methylglyoxal with

glutathione on $p_{\rm II}$, A., III, 139. Girschovitsch, N. G., production of lowcarbon cast iron in a cupola furnace,

B., 1348.

and Landa, A. L., selection of melting furnaces for malleable iron, B., 1212.

Girskaja, L. A. See Fastovski, V. G. Girton, R. E., sterilisation of maize with sodium hypochlorite, B., 271. Girvin, M. D. See Noller, C. R.

Gisiger, L., solubility of soil potassium and its assimilability by plants, B., 269.

Gisolf, J.H., counting of electrons by means of a discharge tube, A., I, 201.

Gisondi, M., acidity of vegetable oils stored under diverse conditions of aeration and illumination, B., 464.

Gistl, R., physiology of dry rot (Merulius lacrimans domesticus, Falck), A., III, 33.

Giuffrè, L. See Rossi, A. Giulio, A. D., and White, A. E., factors affecting the structure and properties of grey cast iron, B., 679.

Giuriani, A. See Natta, G. Gins, J. A. See Hermann, S. F

Giuseppe, M. See Bruno, B.

Giustozzi, D. See Maymone, B.

Givaudan & Co., Soc. Anon., L., protocatechualdchyde from heliotropin, (P.), B., 529. Preparation of a nitro-derivative of tert.-butyl-ψ-cumene, (P.), B., 1174.

Givaudan-Delawanna, Inc. See Barbier, H., Carpenter, M. S., and Valik, L.

Givens, J. H. See Courtaulds, Ltd. Givens, J. W. See Bataafsche Petroleum Maats., and Shell Development Co.

Gjedebo, F. See Benrath, A.

Glacier Metal Co., Ltd., and Bate, J., bearings, (P.), B., 800.
Gladstone, F. R. See Warne & Co., W.

Gladstone, G. P., antigenic composition and virulence of B. typhosus grown on a chemically defined medium, A., III, 251.

Fildes, P., and Richardson, G. M., carbon dioxide as an essential factor in growth of bacteria, A., III, 145.

Gladwin, F. E., twenty-five-year test of commercial fertilisers for grapes, B., 72. Glaeser, H. See Rademacher, B.

Glagoleva, A. A., heat of solution and dilution of formic acid, A., I, 244.

Glaister, D., and Kerly, M., oxygen consumption and carbohydrate metabolism of the retractor muscle of the foot of Mytilus edulis, A., III, 126.

Glaister, E., combustion in oil engines, B.,

Glansdorff, P., laws of gas mixtures, A., I,

Glanville, W. H., strength tests for highalumina cements, B., 1054. Effect of grading of aggregate on strength and workability of concrete, B., 1208. Grading and workability [of concrete aggregate], B., 1208.

Glarum, S. N., vat[-dye] printing pastes. II. Influence of methods of preparation of printing thickeners on thickening value and colour yield, B., 1326.

Glaser. See Aubel, E.

Glasman, S. See Rogovin, S. Glass, J. J., anorthite from Duke Island,

Alaska, A., I, 434.
Glass, J. P. See Newhouse, W. H.
Glass, J. V. S. See Applebey, M. P., and Imperial Chem. Industries.

Glass, N., so-called magnesium trisilicate, B., 85.

Glass, S. J., migraine and ovarian de-

ficiency, A., III, 40. Glass, V. See Wooldridge, W. R.

Glassberg, B. Y., incidence of non-diabetic

glycosuria, A., III, 254.
Glasscock, H. H., examination of soil detritals, B., 1096.

Glassman, H. N. See Jacobs, M. H.

Glassmann, B., and Barsutzkaja, S., analytical methods and studies in technical practice of linoleum and cork industry. III. Linoxyn, and influence of the glyceryl radical on oxidation of linseed oil to linoxyn, B., 939.

and Gologorskaja, S., digestion of milk

and soya-bean preparations, B., 611. and Rosenblum, D., analytical methods and studies in technical practice of the linoleum and cork industry. II. Determination of linoxyn in linoleum cement, B., 154.

Glassmann, P., and Kantorer, J., determination of water in confectionery by distillation with a mixture of mineral oil and amyl alcohol, B., 833.

Glassner, H. See Friese, H.

Glasstone, S., structure of molecular complexes in the liquid phase, A., I, 127. Oxidation-reduction potentials and their applications, A., I, 246.

Glathe, H., and Seidel, W., storage of stall manure under strictly anaërobic conditions, B., 1385.

Glattfeld, J. W. E., and Stack, (Miss) A. M., catalytic hydrogenation and esterification of C₄-saccharolactones and hydrogenation of butyl crythronate, A., IĬ, 228.

Glaubitz, M., souring of potatoes, B., 1401. See also Haehn, H.

Glavis, F. J., Ryden, L. L., and Marvel, C. S., reaction between sulphur dioxide and olefines. V. Structure of the polysulphones from olefines of the type CHR:CH₂, A., II, 226.

See also Ryden, L. L.

Glazebrook, H. H., and Pearson, T. G., free radicals and atoms in primary photochemical processes; free propyl radical from dissopropyl ketone; dissociation of aliphatic ketones; the acetyl radical, A., II, 43, 229.
Glazova, T. V. Sec Pestov, N. E.

Glazunov, A., effect of chemical composition of colloids in moulding sand, B., 439. Rapid electrographic method of testing galvanic coatings, B., 578.

and Drescher, E., black silver, A., I, 37. and Jolkin, V., electrolytic separation of tungsten from aqueous solutions, A., I, 625. Tungsten bronzes, A., I, 629.

and Schlötter, M., comments on electrolysis of solutions of complex salts, B.,

and Souček, R., KZ and KG_{II} in anodic deposition of silver peroxide, A., I,

and Teindl, J., electrographic testing of the porosity of metallic coatings, B.,

Gleason, G. H., Loonan, A. C., and Guggenheim Bros., sulphur condenser, (P.), B., 780.

Gleave, W. W. See Imperial Chem. Industries.

Gleditsch, E., and Bakken, R., determination of UO2 and UO3 in different layers of a single crystal of uraninite, A., I,

Gleiohmann, H., ore-dressing for Siegerland ores, B., 678.

Gleim, W. See Schlenk, F. Gleizin, V., microchemical analysis of fats, B., 364.

Glemser, O., and Ott, Erwin, crystal-line components of Cortex simaruba amara, A., II, 383.

See also Fricke, R.

Glendenning, M. B. See D'Amour, F. E.Glenfield & Kennedy, Ltd. See Peebles, J. Glenn, C. S., and Mathieson Alkali Works, rotary [cylindrical] kiln, (P.), B., 300.

Glenny, A. T., and Stevens, M. F., stabiliser for Schick [diphtheria] toxin, A., III, 197.

Glet, E., and Gutschmidt, J., alkaloid from the Equisetaceæ family, A., II, 393. Gutschmidt, J., and Glet, P., alkaloid from Equisetum palustre, A., II, 80.

See also Gutschmidt, J.

Glet, P. See Glet, E. Gleu, K., and Wackernagel, K., cyclic quinolinic acid hydrazide and related compounds, A., II, 167.

Gley, P., antistreptococcal action of organic sulphides, A., III, 398.

and Delor, J., antagonism between testosterone and folliculin, A., III, 278. Antagonistic action of testosterone and folliculin on the capon's comb, A., III, 362.

Glezina, O. M. See Kovalski, V. V. Glick, D., histochemistry. XII. Distribution of ascorbic acid in growing barley embryo, A., III, 158. Properties of choline esterase in human scrum, A., III, 220. Choline-esterase activity of superior cervical ganglia, A., III, 429. and Biskind, G. R., histochemistry.

VIII. Relation between concentration of vitamin-C and development of pineal gland. X. Distribution of vita- \min -C in the lens, A., III, 44, 326.

Glickman, C. S., emulsion floor waxes, B., 153. Paste and liquid waxes, B., 465. Glidden Co. See Neuhaus, T. A., Small,

 $J. \, B.$, and Wahlforss, E.

Glikina, M. See Tilevitsch, E. Glikman, L. A., determination of residual strains [in steel] on the basis of hardness measurements, B., 351.

Glikman, S. A., thixotropic viscosity, A., I. 565.

and Medvedkov, E. S., potential and stability of sols of cellulose ethers, A., I, 133.

Glistenko, N. I., topochemical reactions, A., I, 195.

Glixelli, S., and Krokowski, T., tetramethylammonium silicate, A., II, 372. Glizmanenko, D. L. See Miloslavski, S. J. Globar Corporation. See Heyroth, A. H.,

and Thompson, A. J. Globe Steel Tubes Co. See Ihrig, H. K. Glock, G. E., rates of digestion of starches

and glycogen and the bearing on chemical constitution. II. Liver-amylase, A., III, 67. Glocker, R., X-ray determination of elastic tension [in alloys], B., 928.

Glockler, G., complex formation, A., I, 135. and Peck, R. E., electrical conductance and dielectric constant of liquid hydro-

gen chloride, A., I, 11. and Wall, F. T., Raman effect of deuterammonia, A., I, 167. Raman effect of gaseous methyl- and dimethylacetylenes, A., I, 219. Bond force constants and vibrational frequencies of some hydrocarbons, A., I, 602. See also Dorn, J. E., and Wall, F. T.

Glomaud, G. See Olivier-Pallud, P.

Gloor, K., photolyses with zinc sulphide, A., I, 626.

See also Baur, E.

Gloor, W. E., durability of cellulose mixedester lacquers, B., 945.

Glosius, T., nucleus formation on ions in supersaturated vapours, A., I, 564.

Glotz, I. S. See Broniewski, W.

Glówczyński, Z. See Rogoziński, F. Glucharev, G. See Leonteev, I. Glückauf, E. See Paneth, F. A.

Glückmann, T.S. See Pisarshevski, L.V.

Gluschnev, N. F. See Titz, I. N. Gluzman, L. D., separation of crude

anthracene into its components by means of pyridine bases, B., 1308. Glycart, C. K., microchemical methods for

[identifying] alkaloids, B., 287. Glynn, H. E. See Bacharach, A. L.

Glynne, M. D., research at Rothamsted of importance in agriculture, B., 479.

Gnadinger, C. B., insecticide, (P.), B., 1255. See also Evans, L. E.

Gnam, E., dropwise condensation of water vapour, B., 627. Gnatenko, K. M. Sce Kazanski, B. A.

Gneist, K., ensilage processes and the examination of silage, B., 1402.

Gnesin, J. D., and Dorosinski, L. S.,

boron in brine and the salt deposits of the Ukraine. II., A., I, 154.

Gnezda, J., units of affinity of the elements, A., II, 283.

Gnüchtel, A. See Helferich, B.

Go, Y., and Kubo, T., relation of the inner fine structure of fibres to their mechanical properties. I., B., 330.

and Nakamura, Seiji, production of mucilage by bacteria. I. Class natto-bacillus, A., III, 274. I. Classification of

Goadby, H. K., action of parathormone. III., A., III, 403.
Goard, D. H., and Charnley, F., vacuum

in canned salmon, B., 1124.

Gobrecht, H., absorption and emission spectra of ions of the rare earths in the solid state, A., I, 60. Absorption and fluorescence spectra of ions of the rare earths in solid bodies especially in the infra-red, A., I, 281.

and Tomaschek, R., detection of rare earths by absorption and fluorescence,

A., I, 376.

Gochschtein, J. P., polarographie determination of sulphate ion, A., I, 324. Polarographic determination of nitrates in presence of sulphate ion, A., I, 375. Influence of concentration of indifferent electrolyte on magnitude of the diffusion current of the cation under analysis, A., I, 415. Polarographic analysis of commercial barium chloride, in relation to the requirements of the U.S.S.R. Bureau of Standards, B., 340. Polarographie analysis of technical zinc chloride, in relation to the U.S.S.R. Bureau of Standards specification, B., 435.

Gockel, H. See Hinsberg, K.

Gočkowski, S. See Welter, A. Godard, H. P., and Seyer, W. F., determination of the sodium chloride content of air, A., I, 101.

Godart, J., ultra-violet and infra-red spectra of thiophen, thiophthen, and thionaphthen, A., I, 280.

Godbole, N. N., and Gunde, B. G., analysis of the seed oil from Celastrus panniculata (duduku oil), B., 257.

and Ketkar, V. V., butyric acid index of

Indian butters, B., 612. and Srivastava, P. D., sweating of soda and potash rosin soaps and their surface tension. I., A., I, 234. Unsaponifiable fraction of mohwa [mowrah] oil from the United Province, India. I., B., 940. Sweating and foaming properties of sodium and potassium resinates. II. Foam number of sodium and potassium resinates, B., 943.

Godchot, M., and Cauquil, (Mlle.) G., action of hydrocyanic acid on active 3-methylcyclohexanone, A., II, 62. Action of hydrogen cyanide on 4-methylcyclohexanone; preparation of the two stereoisomerides of 4-methylcyclohexanol-1-carboxylic acid, A., II, 149. Molecular rearrangements during the dehydration of 4-methylcyclo-hexylisopropylpinacol, A., II, 241.

and Vièles, P., dl- and active methyldiglycollic acids and their derivatives,

A., II, 273.

Goddard, A. E., mercuration of nitro-

toluidines, A., II, 357.
Godfrey, G. H., control of soil fungi by fumigation with chloropicrin, B., 73.

Godfrey, K. L. See Wooster, C. B. Godfrey, L. S. See Okey, R.

Goding, W. B., and Florida Humus Co., dehydrating apparatus, (P.), B., 629.

Godney, I. N., and Pamfilov, A. V., titanium. VII. Thermodynamics of chlorination, A., I, 473.

and Sverdlin, A., heat capacity, entropy, and free energy of the vapour of

phosphorus P2, A., I, 293. Godowsky, L., jun. See Eastman Kodak

Godward, L. W. N., and Ward, A. M., elimination of the phosphate radical in qualitative analysis, A., I, 530. Goebel, H. See Schering-Kahlbaum A.-G.

Göbel, J., solvents and diluents for oil paints and oil varnishes, B., 62.

Goebel, W. F., chemical constitution of benzoylglycuronic acid, A., II, 443. Immunological properties of an artificial carbohydrate-protein antigen containing glycuronic acid, A., III, 338. See also Reznikoff, P.

Goedbloed, J., influence of concentrated potassium thiocyanate solutions on structure and volume of the vitreous

body, A., III, 23. Gödde, O. See Langenbeck, W.

Goedewaagen, M. A. J., relative weight of shoot and root of different crops and its agricultural significance in relation to amount of phosphate added to soil, B., 1386.

Goedike, J. G., graining and surfacing of metal photolithographic and offset press

plates, (P.), B., 502.

Goedrich, P., iodised bile acids, (P.), B., 981. Iodine-bile compound (iodocholeate); physical, chemical, bactericidal, and pharmacological properties, B., 1130.

Goehlich, H.J. See Bergmann, L. Göhringer, A. See under Metallhütte A.Göhringer & Hartdegen.

Göler, von, long-period internal-pressure tests on [pipes of] lead-antimony alloys, B., 1221.

Göller, W. See Helferich, B.

Goens, E., calculation of the velocity of propagation of elastic waves in crystals, A., I, 353.

Goeppert-Mayer, M.G., and May, A., lattice sums involved in the calculation of elastic constants, A., I, 501.

Gören, G., and Cahn, C., coating of articles of food, (P.), B., 839.

Goergens, C. See Butenandt, A.

Goerig & Co. Akt.-Ges., and Haken, K. von, destructive distillation of carbonaceous materials, (P.), B., 207. Goerk, H. See Hüttig, G. F

Görlich, P., photo-effect at selenium barrier layers, A., I, 64. Nature of the boundary surface of selenium film cells, A., I, 446.

Görnandt, R., aluminium foil as butter wrapping material, B., 388.

Görtz, S., determination of cholesterol in 0.1 c.c. of blood, serum, or plasma by the acetyl chloride method, A., III, 164. Gösmeier-Kres, E., removal of phenol from

industrial waste liquors, B., 298. Goth, H. E. A., and Industrikemiska Aktieb., evaporation, (P.), B., 99. See also Öman, E.

Goethals, G., Bouveault reaction for the preparation of unsaturated alcohols, A., ÍI, 480.

Göthlin, G. F., biological assay of the vitamin-C content of Swedish apples, A., III, 155.

See also Lalin, T.

Goetsch, C. See Allen, W. M. Goettsch, M. See Fenn, W. O.

Goetz, A., and Jacobs, R. B., intensities of X-ray reflexions from bismuth crystals between 25° and 530° abs., A., I, 171. See also Jacobs, R. B.

Götz, H., keratophyres of the Lalm trough, A., I, 586.
Götz, M. See Pfretzschner, H.
Götze, W. See Werle, E.

Goetzel, C. G., hard alloys of silver for lining ring grooves of light-alloy pistons, B., 577. Mechanical properties of four binary tin bronzes at room and elevated

temperatures, B., 1221. Goeze, G. See Gassner, G.

Goff, R. A. See Edwards, D. W. Goffin, O., influence of abnormal grain composition of added materials on compressive strength of concrete, B., 554.

Gogan, J., apparatus for testing individual

bodies, (P.), B., 636. Gogate, D. V., magneto-striction in degenerate electron gas, A., I, 227.

Gogoberidse, D. B., bent surfaces of rocksalt, A., I, 350.

and Nakasehidse, L. R., mechanical twinning structure in calcspar. II. Secondary cleavage in the twinning-plane, A., I, 350.

Gogte, G. R., β -arylglutaconic acids. III. Condensations with phenolic ethers, A.,

Golbraich, Z. E., analysis of nitrogenous organic compounds. II. Detection of nitrogen, A., II, 436.

Sce also Alexeevski, E. V. Gold, H. See Modell, W.

Gold Savers, Ltd., centrifugal devices for metallic mineral recovery, (P.), B., 358. Goldabenkov, M. K. Sec Drozdov, N. S.

Goldberg, A. A., measurement of the porosity of paper and other porous membranes, B., 1189.

Goldberg, I., and Banfl, R. F., apparatus for micro-determination of ammonianitrogen by distillation and aëration, A., III, 288.

Goldberg, J. M. See Goldberg, L. B.

Goldberg, K. M., preparation of barium chloride from barite, with partial replacement of hydrochloric acid by sodium chloride, B., 33. Preparation of barium chloride from barytes, with partial or total elimination of evaporation of solutions, B., 235. Removal of iron from solutions obtained in chlorination of ores, and separation of salts of non-ferrous metals, B., 236.

Goldberg, L., absolute multiplet strengths, A., I, 104.

See also Menzel, D. H.

Goldberg, L. B., Goldberg, N., Goldberg, W., and Goldberg, J. M., self-cleaning screen for placer-mining machines, (P.), B., 633.

Goldberg, M. W. See Ruzicka, L. Goldberg, N. See Goldberg, L. B. Goldberg, W. See Goldberg, L. B. Goldberger, M. A. See Frank, R. T.

Goldberger, S. See Margaria, R. Goldblatt, L. A. See Croup, A. H., and

Wahlforss, E.

Goldblatt, M. W., insulin and the thyroidectomised rabbit, A., III, 151.

Golden, A., and Irwin, M. R., modifications of the Rous-Turner solution for preservation of bird erythrocytes, A., III, 289.

Golden Gate Club, relationship of pigment volume to properties of inside enamels, B., 62.

Goldenburg, M., and Rothberger, C. J., action of veratrine on the Purkinje fibres, A., III, 178.

Goldfarb, J. L., 1- and 5-amino- and -acylamino-nicotines, A., II, 38. Esters of

nicotinic acid, A., II, 305. and Andrijtschuk, M. V., condensation of 2-aminonicotine with ω-bromoacctophenone, A., II, 473.

See also Katznelson, M.M.

Goldfarb, W., ketosis in primates, A., III,

Fazikas, J. F., and Himwich, H. E. effect of cysteine on metabolism of isolated brain tissue, A., III, 90. Effect of methylenc-blue, cystine, and cysteine on the metabolism of the intact animal, A., III, 259.

Goldhaber, M., and Briggs, G. H., scattering of slow neutrons, A., I, 593.

See also Burcham, W. E., and Chang,

W. Y.Goldie, H., influence of aminophenylstibinates on the toxin-antitoxin complex, A., III, 5. Precipitation of diphtheria toxin by organic compounds of antimony, A., III, 6. Influence of aminophenylarsinates on the toxinantitoxin complex, A., III, 55. Preservation of human and sheep erythrocytes in naphthalenedisulphonato solution, A., III, 110. Stabilisation by formaldehyde and recovery by sodium naphthylaminetrisulphonate of the antitoxin of antidiphtheria serum, A., III, 117. Antitoxin stabilised by formaldehyde and isolated from antidiphtheria serum by sodium β -naphthylamine-4:6:8-trisulphonate, A., III, 197. Effect of arsenobenzenes on diphtheria toxin, A., III, 339. Stabilisation of antitoxic proteins of serum with amides and denaturation with keten, A., III, 339.

Goldin, I. See Steinberg, S. S.

Golding, J., milk tests, B., 179. Golding, N. S., gas requirements of moulds. I. Penicillium Roquefortii, B., 972.

Goldman, G. See Delimarski, J. K. Goldman, I. M. See Vul, B. M.

Goldman, M. A., and Commercial Filters Corp., filters, (P.), B., 5. Goldman, S. See Lilienfeld, J. E.

Goldmann, F., photographic process, (P.), B., 983.

Goldovski, A., production of sunflower-seed eil by kneading the moistened pulp, B., 366.

Goldowski, N., colorimetric detection of [metallic] corrosion by means of $p_{\rm H}$ indicators, B., 929.

See also Prot, M. Goldschmid, O. See Eirich, F.

Goldschmidt, B., coefficients of fractionation of salts possessing several hydrates, A., I, 457.

See also Guillot, M. Goldschmidt, H. J. See Bradley, A. J. Goldschmidt, Samuel, Ravdin, I. S., and Lucké, B., anæsthesia and liver damage. I. Protective action of oxygen against the necrotising effect of anæsthetics on the liver, A., III, 136.

Goldschmidt, Samuel. See also Ronghton,

Goldschmidt, Stefan, and Martin, K., toxic agents, particularly insecticides, (P.), B., 1256.

Wolff, R. R., and Kessler Chem. Corp., acid anhydrides, (P.), B., 1311.

Goldschmidt, V. M., principles of distribution of chemical elements in minerals and rocks, A., I, 381. Geochemistry and periodic system of the chemical elements, A., I, 482. Refractory building materials, (P.), B., 140. products, (P.), B., 241. Refractory

Goldschmidt Akt.-Ges., T., workable paints having a low content of oil, (P.), B.,

1242.

See also Fulda, W.

Goldsmid, P. See Vidal, L. Goldsmith, B. J., dyeing apparatus, (P.),

B., 1328.

Goldsmith, E. V. See Smith, L. M. Goldsmith, H. H., relation between the half-life times and tho at. wts. of the β -ray emitters, A., I, 160. See also Rasetti, F.

Goldsmith, T. T., jun., refractive index of water for 8-24 cm. electromagnetic waves, A., I, 222.

Goldstein, B., and Ginzburg, M., proteinases in tissues of chick embryo, A., III, 32. Proteinases (cathepsin) in tissues of the chicken embryo, A., III, 140.

Goldstein, E. J., and Lazarev, A. M., determination of elasticity of varnish films by residual deformation, B., 467.

Goldstein, H., Blezinger, T., and Fischer, Hans, derivatives of 4-iodonaphthalene-l-sulphonic acid, A., II, 183.

and Gardiol, P., new synthesis of 3-acetamido-β-naphthaquinone, A., II,

and Gardiol, P. [with Comtesse, M., Mohr, R., and Fischer, Hans], derivatives of 3-amino-2-naphthol, A., II,

and Streuli, M., 2:3-diaminonaphthalene, A., II, 238. Derivatives of lin.-benzo-

quinoxaline, A., II, 391.

Goldstein, L., theory of atomic diffusion phenomena, A., I, 278. Coulomb force between two neutral atoms, A., I, 278. Exchange energy in many-electron problems, A., I, 286. Radioactive a-disintegration, A., I, 338. Energies of nuclear disintegration, A., I, 490. Recoil atoms of radioactive bodies, A., I, 490.

See also Debierne, A. Goldstein, R. F. See Imperial Chem. Industries.

Goldstein, S., microbiological test for carcinogenic hydrocarbons, A., III, 418. Goldstein, S. W., extraction of ipecae, B.,

Jenkins, G. L., and Thompson, M. R., chemistry and pharmacology of Phyto-

lacca americana, N.F., A., III, 287. and Reindollar, W. F., assay of spirit of peppermint, B., 1268.

Goldstern, W., prevention of scale deposits in service hot-water systems, (P.), B., 512.

Goldsworthy, E. See Greishcimer, E. M. Goldsworthy, L. J., and Robinson, R., synthesis of tangeritin, A., II, 111.

Goldsworthy, M. C. See Smith, M. A. Goldsztaub, S., crystalline structure of laurionite, A., I, 334. Boehmite, A., I,

Goldwasser, S. See Beebe, R. A. Goldzieher, M. A., adrenal hormones, (P.), B., 1409.

Golendeev, V. P., synthesis of glycerides, A., II, 175. Influence of cis-trans-isomerism on selective hydrogenation, A., II, 227. Hydrogen value of unsaturated compounds, in particular of fats, B., 937. Golenternek, J. Seo Johnson, R. W. Golesenko, O. M., determination of diazo-

compounds, A., II, 188.

Golikov, I. N. See Bernasovskaja, S. A. Goljanizki, I. A., and Brjuschkova, K. A., vitamin-C in tea, A., III, 155.

Goll, J. See Splichal, J. Gollandski, S. M., colloidal form of quinine ("quinasol"), B., 618.

Golle, V. P. See Demidenko, T. T. Gollmick, F., influence of zinc, iron, copper, and of combinations of these on growth

of Aspergillus niger, A., III, 272. Gollnow, H., second isotope of lutecium and magnetic moment and quadrupole moment of the 175 Lu nucleus, A., I, 57.

Goloborodko, T., and Rosenkevitsch, L., angular distribution of photo-neutrons from beryllium, A., I, 339.

Golod, M. See Kozlov, N. Gologorskaja, S. See Glassmann, B.

Golomb, L. See Sichra, N. Golombik, M. S., corrosion of metals [iron], B., 1057.

Golossova, O. N. See Kuhlmann, A. G. Goloub, S. I., and Koulev, G. A., influence

of preliminary illumination and of temperature on the absorption of light by cuprous oxide, A., I, 392.

Golovati, R. N., determination of lime in blast-furnace slag and limestone, in systematic analysis, B., 435. Chemical changes in the semi-acid masonry of coke ovens, B., 860. Temperature of reduction of lead oxide as a measure of the reactivity of solid fuels, B., 1151.

Golovistikov, I. See Osnos, I. Golovkov, M. P., crystallo-optical study of aluminium hydroxide obtained at the experimental plant of GIPKH, A., I, 173. Structure and morphological characteristics of ico crystals, A., I, 287. Crystals of sodium ferroeyanide,

B., 903. and Karpov, P. K., application of crystallo-optical methods [of analysis] in chemical practice, B., 370.

Klementiev, V. A., Michailova, M. N., and Obukov, A. P., phosphorus pentasulphide, (P.), B., 134. See also Ansheles, O. M.

Golovtschenko, V. A. See Migal, P. K. Goltz, L. N., and Charlamov, V. N., electrolytic preparation of ferrochromium, B., 355.

Goltzschmidt, V. A., and Trechletov, K. F., kinetics of bimolecular reactions in

solutions. I., A., I, 367.
and Vorobiev, N. K., kinetics of bimolecular reactions in solutions. II., A., I, 367.

Golubev, A. A. See Kazarnovski, S. N. Golubev, I. F., and Lavrentieva, A. V., determination of thermal conductivity

of ammonium salts, B., 1198. See also Podeiko, A. G.

Golnbeva, Z. F. See Korinfski, A. A. Golubkov, P. B., heat balance in electric furnace during production of aluminate slags, B., 686.

Golubovskaja, N. See Kozlov, N. Goluschko, N. A. See Belovodski, V. V. Gomarasca, P., chemical naturo of the granules in mast cells, A., III, 376.

Gombas, P., theory of metallic binding. IV., A., I, 224.
Gomez, E. T., and Turner, C. W., effect of thyroxine and galactin on lactation in hypophysectomised guinea-pigs, A., III, 278. Adrenotropic principle of the pituitary in relation to luctation, A., III, **278.**

Gomez, J. See Florkin, M.

Gómez Aranda, V. See Marder, M. Gomez-Vega, P., mycostatic studies on certain Monilia and related fungi, A., III, 181.

Gomm, A. S. See Imperial Chem. Industries.

Gomonet, M., manufacture of oxygen and oxygen-enriched air, B., 906.

Gondet, H. Sco Fournier, G. Gonell, H. W., protection of concrete structures from corrosive water and soil, B., 40. Dust measurement, B., 853. Powder measurements, B., 1142.

Gonggrijp, H., orientation phosphate pot tests with maize, B., 167.

Gonnerman, H. F., volume change and soundness of Portland cement, B., 784.

Timms, A. G., and Taylor, T. G., effect of calcium and sodium chlorides on concrete when used for ice removal, B., 785.

Gonser, B. W., physical properties of soft solders and the strength of soldered joints, B., 572.

and Epstein, S., metals and alloys in the printing industry. I.-IV., B., 573, 793.

See also Slowter, E. E., and Wert, L. R. 1:an.

Gontard, (Mlle.) A. See Jaulines, P. Gontscharov, A. J., fine papers from cotton

waste and flax-hemp siftings, B., 535. Gontscharov, S., and Bnrvasser, Adetermination of a-cellulose, B., 1033.

Gontzea, I. See Nitzeseu, I. I. Gonyer, F. A. Sco Berman, H., Larsen,

E. S., and Larsen, E. S., jun. Gonzaga, A. C., chicken blood, A., III, 164.

González de Barcia, J. See Moles, E. Gooch, S. D. See Kerschbaum, F. P. Good, G. P. See Rider, T. H.

Good, H. G., early history of Liebig's laboratory, A., I, 203.

Good, R. F., cetane numbers [of Diesel fuels], B., 1298.

Goodacre, R., fatigue properties of patented steel wires. IV. Endurance proper-ties at high stresses, B., 562.

See also Gill, E. T.Goodall, A. W. See Imperial Chem. Industries.

Goodall, C., treatment of grass, (P.), B., 186.

Goodall, D. W. See Bolas, B. D.

Goodall, F. L., wool dyeing, B., 660. Fastness of wool dyeings to wet treatments. III. and IV., B., 1039.

Goodchild, C. E. See Davis, H. L. Goodell, H. See Cattell, M.

Goodell, M. See Sahyun, M.

Gooden, E. L., and Smith, C. M., principal optical and physical properties of the carbon tetrachloride solvate of rotenone, A., II, 348.

Gooderham, W. J., analysis of coal gas by liquid fractionation. I. Complete analysis of coal gas. II. Determination of conjugated diolefines, B., 202.

Goodeve, C. F., absorption spectra and photosensitising activity of white pigments, A., I, 110. Cluster theory of imperfect gases, A., I, 558.

and Marsh, A. E. L., heat of decomposition of dichlorine heptoxide, A., I,

518.

and Richardson, F. D., dichlorine hexoxide, A., I, 195. Absorption spectrum of chlorine trioxide and chlorine hexoxide, A., I, 216. Existence of chlorous anhydride, A., I, 577.

See also Durtnall, H.J.A., and Porret, D.Goodheart, G. W. See Bolton, C.

Goodhue, L. D., electron tube and instrument for use with the glass electrode, and a rugged type of glass electrode, A., I, 332.

and Smith, C. M., particle size of insecticidal dusts; differential manometertype sedimentation apparatus, B., 170.

Gooding, E. J., decolorising of glass, B., 136. Goodlass Wall & Lead Industries, Ltd., and Butcher, W. T., refining of lead and lead alloys, (P.), B., 1227.

and Eckford, W., presses for extruding

metals or other materials, (P.), B., 358.

and Waring, H., filters, (P.), B., 634. See also Waring, H.

Goodloe, P., and Frazer, J. C. W., direct determination of oxygen in organic compounds by hydrogenation, A., II, 358.

Goodman, H., acno and furunculosis; treatment with physiological sodium chloride, locally or by intravenous injection, A., III, 171.

Goodman, J. G. See Salmon, W. D.

Goodman, L. See Gilman, A.

Goodman, L. A., and Visking Corp., reinforced hydrated cellulose container [for edible products], (P.), B., 1324.

Goodner, K. See Horsfall, F. L., jun. Goodrich, F. J., and Koozin, E., [constituents of] Struthiopteris spicant, A., III, 445.

Sec also Kopet, J. C.

Goodrich, M., electron scattering in helium, A., I, 542.

Goodrich Co., B. F., formation of Ndiarylthiocarbamates of metals, (P.),

See also Brous, S. L., Campbell, A. W., Craig, D., Jones, P. C., Newton, Edwin B., Oenslager, G., Semon, W. L., and Sloan, A. W.

Goodspeed, E. W. See Willard, H. H.
Goodspeed, G. E., and Coombs, H. A.,
replacement breecias of the Lower

Keechelus, A., I, 432. Goodspeed, T. H. See Uber, F. M. Goodwillie, D. H. See Amer. Securit Co. Goodwin, F., White, E. A., and Cady, H. P., separation and purification of gas [carbon

dioxide], (P.), B., 543.

Goodwin, F. G. See Internat. Combustion.

Goodwin, F. M. See Jones, G. W.

Goodwin, L. G. See Berry, Harry.

Goodwin, R. H., rôle of auxin in leaf

development in Solidago species, A., III,

Goodwin, T. H. See Cox, E. G., and Llewellyn, F.J.

Goodwin, W., Pizer, N. H., Salmon, E. S., and Ware, W. M., control of apple scab: Allington Pippin and Newton Wonder, 1236, B., 1106.

See also Butts, J. S., and Deuel, H. J.,

Goolden, L. L. See Ficklen, J. B. Goos, F., optical constants of thin silver layers, A., I, 19. Optical constants of thin gold films by means of transmission and reflexion measurements from the ultra-violet to the infra-red, A., I, 503.

Goosmann, J. C., and Adico Development Corp., freezing of liquid carbon dioxide, (P.), B., 780. Apparatus for producing solid carbon dioxide, (P.), B., 1202.

Goossens, N. See Dyckerhoff, H. Gopalarao, G. See Murty, G. V. L. N.

Gora, E., Fermi's theory of β -decay, A., I,

Goralnik, A. S. Sce Evstropiev, K. S. Goranson, E. A., geology of the Monarch

and Kicking Horse ore deposits, British

Columbia, A., I, 586. Goranson, R. W., thermodynamic treatment of systems, particularly solutions, from point of view of activity and related functions, A., I, 184. Silicate-water systems: the "osmotic pressure" of silicate melts, A., I, 431. See also Adams, L. H.

Gorbach, G., bacterial proteases. VI. Protease system of Gorini's acidoproteolyte, A., III, 429. and Barle, K., determination of honey

diastase, B., 965.

and Pirch, E., secretion of bacterial proteases and their dependence on pH, A., III, 68. Protease secretion of gelatin-liquefying bacteria, A., III, 312.

Gorbatova, V. A. See Liepatov, S. M. Gorbatschev, S. V., elementary processes in aërosols, A., I, 360. Gorbunov, N. I., energy of cation adsorp-

tion [by soils], B., 595. Gorbunova, A. See Rutovski, B.

Gordenne, U., corrosion-resistance of steels low in copper, B., 143.

Gording, R. See Steinkopf, W.

Gordon, A. R., free energy of electron gas, A., I, 3. Free energy of hydrogen cyanide from spectroscopic data, A., I, 138. Free energy of diatomic carbon vapour, A., I, 349. Diffusion constant of an electrolyte, and its relation to concentration, A., I, 459.

Sec also Wetmore, F. E. W. Gordon, A.S., Kleinberg, W., and Charipper, H. A., reticulo-endothelial system and the concept of the "anti-hormone," A., III, 362.

Gordon, C. B., artificial [plastic] substances,

(P.), B., 262.
Gordon, C. W. See Wohlenberg, W. J.
Gordon, E. A., and Seljakov, N. J., X-ray phenomena in graphitisation of steel and cast iron, B., 44.

Gordon, F. C., apparatus for tempering glass, (P.), B., 38.

Gordon, H., and Levine, S. Z., respiratory metabolism in infancy and childhood. XVI. Effect of intravenous infusions of fat on the energy exchange of infants, A., 111, 258.

Gordon, H. F. See Bassett, H.

Gordon, J., and Wood, N., reversible neutralisation of the anthracidal power of scrum by Congo-red, A., III, 337.

Gordon, J.J. See Dippy, J.F.J., Eastman Kodak Co., and Evans, D. P.

Gordon, R. M., tin-plating, (P.), B., 933. Gordon, R. R. See Bailey, C. R.

Gordon, W. See Alving, A. S. Gordonoff, I., and Ludwig, F., vitamins in cancer therapy, A., III, 299. Gordy, W., infra-red evidence for existence dy, W., infra-red evidence for existence of hydrogen linkings, A., I, 9. Infra-red absorption spectra of dioxan-water mixtures, A., I, 62. Infra-red absorption of [methyl] alcohol-acetone mixtures, A., I, 112. Possible formation of hydrogen bonds in liquid mixtures, A., I, 232. Infra-red absorption spectra of liquid mixtures, A., I, 232. Effects of certain liquids on the OH vibrational band of alcohol. on the OH vibrational band of alcohol, A., 1, 281. Infra-red absorption of various solutions of acetic acid, A., I, 343.

See also Williams, D. Gore, H. C., Frey, C. N., and Standard

Brands, Inc., coffee, (P.), B., 1130. Gore, J. T., saliva and enamel decalcification, A., III, 13.

Gorelik, I. S. See Joffe, J. S. Goremikin, V. I., oxidation of hydroxylamine compounds of platinum, A., I, 629.

See also Tscherniaev, I. I.

Gorenbein, E. J., kinetics of complex formation in non-aqueous solutions, in connexion with conductivity. I., A., I, 83. Electro-chemical study of group II and V bromides in solutions of aluminium bromide in cthyl bromide, A., I, 310.

See also Plotnikov, V. A.

Goresline, H. E. See Beavens, E. A. Goria, C., and Venturello, G., reactivity of binary alloys. I., A., I, 623.

See also Losana, L., and Prever, V.
Goriatschev, V. S. See Kursanov, D. N.
Goriatscheva, G. S. See Terentiev, A. P. Gorin, $E_{\cdot \cdot}$, theoretical constitution of

metallic potassium, A., I, 109. Gorin, J. A., Neimark, O. M., and Kogan, F. N., changes in process of contact transformation of ethyl alcohol into

butadiene in connexion with fatigue of the catalyst, B., 414.

Gorini, C., rational pasteurisation of milk, B., 610.

Goris, A., and Canal, H., chemical composition of buds of Populus balsamifera, A., III, 50.

Goritzkaja, L. See Berlin, L. E.

Gorjaev, M. I., effect of rate of cooling of butter fat on its solidifying point, B., 584.

Gorman, E. A., jun. See Rose, D. H. Gorman, M. J. See Parkes, J. W.

Gorman, P., jun. See Union Carbide & Carbon Corp.

Gorni, J. J., determination of sulphur in coal, B., 637. Rapid determination of silicon in cast iron, steel, and silicates, B., 1212.

Gorocholinskaja, M. S., standardisation of methods for chemical control of furfuraldehyde production, B., 1018.

Gorodetski, E., and Schesterikova, T. P., indications of liver damage during thyrotoxicosis, A., III, 302. Gorodezkaja, F. A. Sce Kobeko, P. P.

Gorodisskaja, G., and Simakov, P. V., influence of trauma on the sugars of frog's brain, A., III, 21.

Gorovoi, B. J., influence of ratio of barium hydrosulphide to barium hydroxide in barium sulphide solutions on the zinc oxide content of lithopones, B., 589.

Gorschtein, G. I., and Dishevski, J. F., hygroscopicity and deterioration of

complex fertilisers, B., 377.
and Tkatschenko, Z. P., preparation of sodium nitrate from sodium chloride and ammonium nitrate, B., 33.

Gorschtein, K. I. See Kopelevitsch, G. V. Gorski, F. K., crystallisation of thin layers of supercooled liquids, A., I, 117.

Gorski, V. S., orange modification of mercuric iodide, A., I, 40. Gorter, A. See Lee, P. J. van der. Gorter, C. J., negative result of an attempt

to detect nuclear magnetic spins, A., I, 18. Paramagnetic relaxation in a transversal magnetic field, A., I, 20. Paramagnetism at radio frequencies, A., I, 352.

and Brons, F., magnetic inhibition of susceptibilities at radio frequencies, A., I, 452. Experiment about electric absorption, A., I, 498. and Kronig, R. de L., theory of absorp-

tion and dispersion in paramagnetic and dielectric media, A., I, 20.

Gorter, E., protein films, A., I, 511. and Maaskant, L., spreading of urease and Bence-Jones protein, A., I, 183. Spreading of protamine insulinate, A.,

Maaskant, L., and Lookeren Campagne, G. J. van, spreading of fibrinogen, A., I, 134.

Gorter, F. J., differentiation of growthpromoting factors in yeast which are related to rat pellagra, A., III, 103.

and Funke, G. L., growth and production of growth-substance in seedlings of Raphanus sativus in moist and dry

air, A., III, 502.
Gortikov, V. M., apparatus for determining electrokinetic potentials of powdered substances, A., I, 152.

and Malinovskaja, N. P., electrokinctic potential of natural calcium carbonates, A., I, 305.

Malinovskaja, N. P., and Kochergin, A. E., determination of exchange capacity of soils at given p_H values, B., 1098.

and Ostapenko, I. G., sign of charge of calcium carbonate and its relations to its formation and to the composition of the equilibrium solution, A., I, 238.

and Panteleeva, L. I., kinetics of solution of calcium carbonate, A., I, 250.

Gortner, R. A., cobalt—an essential ele-

ment, A., III, 255. and Bull, H. B., electrokinetics. XIX. Interfacial energy and the molecular structure of organic compounds. V. Electric moment of Al₂O₃: benzene-nitrobenzene interface, A., I, 459.

See also Aronovsky, S. I., Brown, W. R., Frampton, V. L., and Hessler, L. E. Goslawski, W., influence of hydrogen ions

on dielectric potential and surface tension of cinchonine and cinchonidine

solutions, A., I, 180. Gospe, S. M. See Lucia, S. P. Goss, E. F. See Wilster, G. H.

Goss, II., and Gregory, P. W., glutathione concentration and hereditary size. IV. Effect of suckling, A., III, 127.

See also Kleiber, M., and Lerner, I. M. Goss, H. F. See Standard Oil Development Co.

Goss, M. J. See Phillips, Max. Goss, W. H. See Acree, R. J.

Gosselin, A., constitution of organic compounds based on thermochemistry, A., I, 31.

Gosselin, G. See Bouthillier, L. P. Gosselink, K. R. See Bogin, C. Gosseries, A., hydrolysis of cobaltous chloride solutions, A., I, 517.

Gosset, A., and Binet, L., increase of glutathione in liver following sulphur medication, A., III, 176.

Gostkowski, K., influence of capillary tube materials on electrokinctic potential, A., I, 130. Water with very small conductivity, A., I, 153.

Goswami, M., and Saha, A., analytical uses of Nessler's reagent. III. Determination of formaldehyde, pyrogallol, tannic and gallic acids; their absolute oxygen values, A., II, 436. Composition of boiled oil, B., 696.

Gotgelf, N. See Jachkind, A.

Goto, K., Inaba, R., and Nozaki, H., sinomeninc. XLV. Synthesis of Nmethyltuduranine methyl ether, A., II,

Goto, S. See Kotake, Y., and Yamafuji, K. Gotovkina, L. V. See Poloskin, E. N.

Gotsdiner, R. G. See Zvenigorodskaja, V. M. Gotsev, T., action of tobacco smoke on the heart, blood pressure, and blood vessels, A., III, 425.

Gottardo, P. See Siehrs, A. E. Gottdenker, F. See Eisler, M. Gottfried, S. P. See Natelson, S.

Gottlebe, P., and Krause, J., suitability of experimental anemias as a test for antianemic substances. IV. Collargol-saponin anæmia of rats as a quantitative test for injected liver preparations, A., III, 255. See also Zipf, K.

Gottlieb, G. See Taschner, E. Gottlieb, J. S. See Finni, J. N. Gottsacker, E., trioform, a disinfectant,

Gottschalk, V. H., and St. Clair, H. W., use of sound and supersonic waves in metallurgy; experiments in clearing fume, fog, and smoke, B., 788. Gouaux, J. L. See Eaton, A. G.

Goubeau, J., use of Raman effect in analytical chemistry, A., I, 43. ψ -Halogens. XXXIII. Electro-affinity of the hydroxyl group, A., I, 115. Interpretation of Raman spectra of alcohols and acetone by their changes on solution in them of metal perchlorates, A., I, 394.

and Klemm, W., electron affinity of the hydroxyl group. II., A., I, 552.

See also Birckenbach, L. Goudard, H. See Binet, L.

Goudet, G., spectrum of selenium in the far ultra-violet, A., I, 336.

Goudey, R. F., residual chlorination on the Los Angeles [water] system, B., 192.

Goudsmit, A., and Summerson, W. H., [transmission] photometer, (P.), B., 395. Goudsmit, J., and Westenbrink, H. G. K., determination of an eurin (= vitamin- B_1) in urine by the thiochrome method, A., III, 364.

See also Westenbrink, H. G. K.Goudswaard, A., and Timmers, J. C., colorimetric evaluation of derris root, B., 840.

Gough, C. M. See Watkins, C. M.

Gough, H. J., and Pollard, H. V., properties of materials for cast crank shafts, B., 791. Effect of specimen form on resistance of metals to combined alternating stresses, B., 920.

and Sopwith, D. G., resistance of special bronzes to fatigue and corrosionfatigue, B., 353. Influence of the mean stress of the cycle on the resistance of metals to corrosion-fatigue, B., 794.

Gough, H. J., and Wood, W. A., strength of metals in the light of modern physics, B., 573.

See also Sopwith, D. G.

Gouguell, B. See Weichherz, J.

Gouin, R., nutrient values of proteins of different origins, B., 838.

Gould, B. S., effects of thorium on bloodand liver-enzyme of white rats, A., III, 93. Effects of saponin and digitonin on lipase and phosphatase action, A., III, 311.

Gould, C. See Deuel, H. J., jun. Gould, C. E., and Hampton, W. M.,

spectacle glass, B., 546.
Gould, D. F. See Barrett Co.
Gould, G. B., interpretation of laboratory coal tests; proximate analysis and calorific value, B., 1292.

Gould, G. E., cucumber beetle control in

1935, B., 712.

Gould G. R. See Spalding, C. G.

Gould, M., chromium-plating, B., 356. Gould, R. E., plastic forming of vitreous bodies of true porcelain or china type, using American kaolins as plastic constituents: manufacturing straight flat ware, B., 912.

and Hedquist, A. J., experimental electrical firing of true porcelain and china-type bodies made from American materials for determination of suitable schedules, B., 912. Development of a true porcelain or china-type vitreous dinnerware body using American materials, B., 912.

Hedquist, A. J., and Boyd, W. B., primary North Carolina kaolins and laboratory experiments in refining to produce a material suitable for use in

vitreous whiteware, B., 912. See also Hedquist, A. J.

Gould, R. G., jun., See Jacobs, W. A. Gould, S., Tressler, D. K., and King, C. G., vitamin-C content of vegetables. V.

Cabbage, B., 183.
Goulden, F. See Cook, J. W.
Goulding, E., textile fibres of vegetable origin, B., 422.

Gounelle, H., and Raoul, Y., sterilising action of chloropicrin on eggs of the bed

bug (Cimex lectularius, Mer.), A., III, 23. Gourévitch, A. See under Gurevitsch, A. Gonrlay, J. S., viscosity of binary mixtures, A., I, 454.

Gourley, J. H. See Havis, L.

Gouverneur, M. F. H., and Locke Insulator Corp., homogenising of clay, (P.), B., 39.

Gouzon, B. See Bierry, H. Govers, F. X., and Indian Refining Co., recovery and purification of lubricating oils from mineral oils, (P.), B., 874. Lubricating oil, (P.), B., 1015. Solvent refining of hydrocarbon oil, (P.), B., 1161. Dewaxing of wax-bearing [lubricating] oil, (P.), B., 1164. Solvent refining of mineral oil, (P.), B., 1165. Dewaxing of hydrocarbon oil, (P.), B., 1303. Govindachari, T. R. Sec Dey, B. B. Govindaswamy, M. V., biochemical aspects of mental disorder, A., III, 379.

Gowen, J. W., and Price, W. C., inactivation of tobacco mosaic virus by Xrays, A., III, 100. See also Price, W. C.

Goy, S., photometric determination of potassium, A., I, 326. Determination of potassium by flame photometry and soil examination. II., B., 1099.

Goy, S., and Roos, O., application of electrometric titration to determination of lime requirement in reference to the physical condition of soils, B., 477. Importance of the state of dispersion of soils in determining their physical and nutrient condition, B., 1248.

Goyal, R. K., influence of variable quantities of asparagine and glycerol on growth of bovine B. tuberculosis and on the $p_{\rm H}$ of cultures in Sauton's medium, A., III, 71.

Grab, E. G., and Food & Fruit Industries, vinegar, (P.), B., 1396.

Grabar, P., and De Loureiro, J. A., microscopic structure of collodion ultra-filters of graduated porosity, A., I,

and Nikitine, S., pore diameter of collodion membranes used in ultrafiltration, A., I, 77.

Grabfield, G. P., and Prescott, B., nitrogen and sulphur metabolism in Bright's disease. VIII. Effect of ingestion of urea on nitrogen exerction and sulphur partition in nephrosis, glomerulonephritis, and cirrhosis of the liver, A., III, 301.

Grabianka, S., radioactivity of minerals, A.,

Grabovski, I. See Bauman, M.

Grabovski, M. A., magnetic study of ferromagnetic powders, B., 454. See also Akulov, N.

Gracia, A. J. See Wingfoot Corp.

Gradinesco, A., and Degan, C., effect of leucylglycine on excretion of total endogenous nitrogen and of purine and creatine derivatives, A., III,

and Santa, N., physiological properties of extracts of the adrenal cortex, A., III,

Grady, A. G., Peet-Grady test [of insecticides], B., 297.

Grady, L. D., jun. See Imperial Smelting Corp.

Graefe, E., simple apparatus for determination of dirt in used motor [lubricating] oils, B., 316. The asphalt sea of Trinidad, B., 406. American processes for cleaning oil, B., 642. Action of tar and asphalt and also benzine and benzene on plants, B., 1390. Graefe, G. See Schlubach, H. H.

Graemiger, B., pulveriser, (P.), B., 992.

Gräser, F., brightness of polished metal surfaces, B., 1219.

Graf, Ernst, measurement of flue-gas temperature, B., l 05.

See also Müller, W. J. Graf, Ernst (Zurich), base exchange in

casein, A., I, 564. Graf, E. K. See Jolson, L. M. Graf, H. See Schenck, G.

Graf, O., use of paper as substrate for concrete road surfaces, B., 556. Recent investigations on cement and concrete for roads, bridges, and dams, B., 676. Test methods for roadbuilding cements, B., 915. Procedures for testing cement for roads, B., 1054. Comparison of German and American cements for road construction, B., 1054.

and Kaufmann, F., behaviour of unprotected and protected wood to attack by fire, B., 1209.

Graf, P. A., viscosity-temperature chart for liquid petroleum products, B., 642.

Graf, R., halogenated pyridinecarboxylie

acids, A., II, 165. and Langer, W., action of thionyl chloride on aromatic amino-acids, A., II, 290.

and Zettl, F., action of thionyl chloride on 2-methylpyridinecarboxylic acids and 2:6-lutidine; new type of oxidation reaction of thionyl chloride, A., II, 115.

Grafe, V., improving and refining victuals and table luxuries containing cellulose, (P.), B., 1266.

Grafenberger, H., Bergmann series of calcium, A., I, 539.
Graff, A. M. See Graff, S.
Graff, (Mlle.) M. See Forestier, H.

Graff, S., and Graff, A. M., composition of tissue-proteins. III. Arginine in the placenta, A., III, 456.

Maculla, E., and Graff, A. M., composition of tissue-proteins. II. Determination of arginine. IV. Determination of cystine, A., III, 456.

Grafflin, A. L., chleride and total osmotic pressure in the blood of marine telcosts. Ā., III, 196.

Grafov, D. I., soft leather substitute, B., 374.

Graham, D. P. See Du Pont de Nemours & Co., E. I.

Graham, F. H., and Washburn, V. D., cleaning of [locomotive] feed-water heaters, (P.), B., 739.

Graham, J. I., and Lance, A. E., [hydraulic cartridge for] breaking [down] coal and similar materials, (P.), B., 302.

Graham, R., and Hay, R., identification of non-metallic inclusions in steel, B.,

Graham, Robert, Torrey, J. P., Mizelle, J. D., and Michael, V. M., internal parasites of poultry: common intermediate hosts: eradication and control, B., 1255.

Graham, R. N. See Union Carbide & Carbon Corp.

Graham, W. R., jun., Houchin, O. B., and Turner, C. W., production of urea in the mammary gland, A., III, 421.

Grahame, D. C., Seaborg, G. T., and Gibson, G. E., inclastic scattering of fast neutrons, A., I, 275.

See also Gibson, G. E., and Seaborg, G. T.

Gralheer. See Ubbelohde, L.

Gram, L., dependence of cestrone production during pregnancy on sex of fœtus and size of placenta, A., III, 185.

Gram, T. See Testrup, N.

Gramatieri, P., dioximes. CXVII, A., II, 155.

Gramatzki, F. See Kirsch, W. Gramberg, W. See Hess, K.

Gramenitzki, M. I., and Sivertzev, I. I., toxicity of air exhaled by man, A., III,

Gramling, L. G. See Christensen, B. V.

Grammaticakis, P., acti n of mixed organomagnesium compounds on phenylhydrazones of ketones; reaction of organomagnesium compounds, A., II, 248. Action of mixed organo-magnesium compounds on the phenylhydrazones of aliphatic aldehydes; preparation of s-alkylphenylhydrazines, A., II, 287. II, 287. Hydrolysis of N-substituted benzaldoximes, A., II, 421.

Gramms, G. See Schneider, Wilhelm.

Gran, H. H., and Braarud, T., phytoplankton in the Bay of Fundy and Gulf of Maine, A., III, 272.

Gran, W. H. See Duffendack, O. S. Granath, A. G. Sce Rapp, A. G. J.

Granath, L.P., and Stranathan, R.K., hyperfine structure spectrograph, A., I, 331. See also Mintz, E. U.

Grand, C. G., and Chambers, R., chemotactic reaction of leucocytes to irritated tissues, A., III, 449.

See also Chambers, R.

Grand, R. See Ruggli, P. Grande, F. See Bogue, J. L. Grande, L. D. See Midana, A.

Grandfield, C. O., and Zink, F. J., humidityand temperature-control cabinet for growing plants, B., 957. See also Zink, F.J.

Grandone, P. See Smith, H. M.

Grandpierre, R., and Grognot, P., effect of vagotonin on blood-corpuscles of guineapigs, A., III, 93.

Grangaud, R. See Ettori, J. Grange, E. R. See Delamere, R. D. Granger, F. S., condensation of phenols

with formaldchyde. II. Resinification of phenol alcohols, B., 1085.

Granger, R. See Mousseron, M. Granick, S., urease distribution in plants:

general methods, A., III, 500. Granigg, B., laboratory apparatus for the magnetic separation of minerals, B., 927.

Grant, A. G. See Whessoe Foundry & Eng. Co.

Grant, G. A., diphenyl compounds and mammary growth, A., III, 93. Influence of hormones on the secretory activity of the regressing mammary gland, A., III, 437.

Grant, H. C., jun., and Kidde & Co., W., detection of suspended matter in fluids, (P.), B., 100. Detection of suspended matter in gaseous fluids, (P.), B., 1149. Grant, James, yeast weakness, B., 1394.

Grant, Julius, quinine sulphate as a fluorescent indicator for precipitation reactions, A., I, 324. Examination of precious stones by means of their fluorescence in ultra-violet light, A., I, 588. Chemical engineering in the pulp and paper industries, with special reference to esparto mills, B., 25. Fluorescence analysis in chemical industry, B., 299. Ultra-violet light as an aid on the farm, with special reference to fertilisers and feeding-stuffs, B., 478. Treatment of paper-mill or similar wastes, B., 1139.

Sce also Dickinson & Co., J.

Grant, R., liver-glycogen after [administration of ammonium lactate, A., III, 63.

See also Best, C. H. Grant Paper Box Co. See Dreymann, C. G. Grapp, A. E., separating and concentrating machine, (P.), B., 632.

Graschtschenko, B. F. See Amsterdamski, J. A., and Kolenov, I. T.

Grasselli Chemical Co., insecticidal com-positions, (P.), B., 734. Rust-removing and rust-proofing compositions, (P.), B., 1360.

Bousquet, E. W., Graves, G. de W., and Salzberg, P. L., [lauryl] parasiticides,

(P.), B., 172.

and Colton, H. S., pure lithium compounds from impure solutions, (P.), B., 135. Recovery of values from lithium-bearing ores, (P.), B., 135. Grasselli Chemical Co., Corson, H. P., and Pfansticl, R., lithium compounds, (P.), B., 135.

Haag, I. L., and Devor, W. R., soluble phosphate [of ammonium], (P.), B., 1046.

and Kannel, C., leather tanning, (P.), B., 1247.

Kepfer, R. J., and Pfanstiel, R., recovery of lithium values from ores, (P.), B.,

and Lawrence, R. E., carboxylic acid derivatives of sulphurised cinchona bark alkaloids [corrosion-inhibitors], (P.), B., 291.

and Lemmerman, P. C., metal [cast-

iron] casting, (P.), B., 357. Welding-rod coating, (P.), B., 358.

Lemmerman, P. C., and Schweitzer, W. K., solutions of alkali silicates, (P.), B., 1046.

Perry, J. H., and Ridler, E. S., sulphurie acid contact process, (P.), B., 341.

and Schweitzer, W. K., [soft-]soldering flux, (P.), B., 358.

and Taylor, E. A., zinc chloride-base flux, (P.), B., 357.

and Weygandt, A. S., cleaning composition, (P.), B., 543.
Grasset, A. See Beltran, E.
Grasshof, H., and Wedekind, E., phenyl acetyloleanyl ketone, A., II, 64.

Grassmann, E., energy of nuclear reactions, A., I, 492. See also Diebner, K.

Grassmann, H. See Dietrich, K. R. Grassmann, P., and Eicke, H., induction of currents in superconductors, A., I,

Grassmann, W., position of constitutional investigations of proteins, A., II, 128. Collagen, B., 69.

Mickeley, A., Schelz, H., and Windbichler, V., tanning effect of sulphitecellulose waste extracts, B., 951. See also Mumm, O.

Gratia, A., analysis and synthesis of lysogenic power of B. megatherium, A., III, 36. The Henroit and Huguenard ultra-centrifuge in biological investigations, A., III, 333. Improvements in the compressed-air ultracentrifugo for biological work, A., III, 447.

Graton, L. C., and Bowditch, S. I., alkaline and acid solutions in hypogene zoning at

Cerro de Pasco, A., I, 155. Gratschev, K.J. See Schtscherbakov, I.G. Gratscheva, A. F. See Sementschenko,

Gratscheva, G. P. See Melnikov, N. N., and Rubinstein, A. M.

Gratz, O., emulsifying reagents in the preparation of processed cheese, B., 972. Gratzianski, M. M., coating of iron by immersion in molten aluminium, B.,

Grau, C. A., and Oliva, V., analysis of the spleen in Gaucher's disease, A., III, 419. Graubner, W., and Krans, H., increase of the blood-pressure action of adrenaline

substances by sparteine, A., III, 267. Graue, G., and Riehl, N., porous structure and specific volume of amorphous and crystalline substances, A., I, 405. Size of pores and interior volume of amorphous and crystalline substances, A., I, 500.

Grauer, T., producing [winding] artificial silk, (P.), B., 1037. Grave, G. See Internat. Precipitation Co.

Gravell, J. H., apparatus for measurement of electrical conductivity of solutions, (P.), B., 1364. Restoring the efficiency of detergent cleansing solutions, (P.), B., 1368.

Graves, F. G. See Altshuler, J. A. Graves, G. de W. Seo Du Pont de Nemours & Co., E. I., and Grasselli Chem.

Gravestein, H., and Middleberg, A. W. F., detection of small amounts of boric acid in glass, B., 781.

Gravesteyn, B. J. J. See Boerlage, G. D. Graviner Manufacturing Co., Ltd., and Salmond, H. M., [apparatus for] prevention and extinction of fire, (P.), B.,

Gray, H. F. See Faber, H. A.

Gray, H. Le B. See Eastman Kodak Co. Gray, J., Kim, M. S., and Ivy, A. C., is a portion of the pancreatic secretory response to a meal due to the absorption of digested food products? A., III, 178.

Gray, J. A. See Penley, H. H., and Ward, A. G.

Gray, J. S., glucose yield of glycinin, A., III,

Bradley, W. B., and Ivy, A. C., preparation and biological assay of enterogastrone, A., III, 377.
and Ivy, A. C., rôle of scrum-calcium

fractions in the effect of viosterol on bleeding tendency in jaundice, A., III,

Gray, J. W., and De Florez, L., heating and distillation, (P.), B., 1148.

Gray, L. H., ionisation method for absolute measurement of y-ray energy, A., I, 4. Rate of emission of γ -ray energy by radium-B and radium-C, and by thorium-B and thorium-C'', A, I, 388.

Gray, M. G., effect of manurial treatment on cooking quality in potatoes, B., 168. Gray, R. E. See Robinson, H. E.

Gray, S. H., and Somogyi, M., blood- and urinary amylase in man, A., III, 298.

Gray, T. T., and Gray Processes Corp., refining of fixed gases, (P.), B., 17.

Gray, W. H., Buttle, G. A. H., and Stephenson, D., derivatives of p-aminobenzenesulphonamide in the treatment of streptococcal infection in mice, A., II,

Gray, W. T., thermal equilibrium of gas in direct-current carbon arc, A., I, 164.

Gray Processes Corporation. See Atwell, H. V., Bjerregaard, A. P., Cooke, H. B., Gray, T. T., and Hill, J. B.
Graymore, J. See Dickinson, D.
Grayson, F., tested cleaners for dairy

plants, B., 179.

Great Western Electro-Chemical Co. See

Hirschkind, W., and Ramage, W. D. Greathouse, G. A., and Stuart, N. W., hydration in fresh and dried red clover roots and shoots with reference to physical properties and chemical composition of tissue, A., III, 235.

Greatorex, H., dyeing and analogous machines, (P.), B., 1041.

Greaves, C., chemicals in wood preservation, B., 1345.

Greaves, E. O. See Morgan, A. F. Greaves, J. D., and Schmidt, C. L. A., vitamin-A requirements of the rat, A., III, 187. Relation of bile acids to absorption of β -carotene in the rat, A., III, 439.

Greaves, J. E., and Bracken, A. F., sulphur content of wheat, B., 1118.

and Hirst, C. T., influence of rotation and manuro on nitrogen, phosphorus, and carbon of the soil, B., 597.

and Nielson, H., vitamin-D and provitamin-D contents of varieties of Utah-grown wheat, B., 608.

Greaves, R. II., second report of the Steel Castings Research Committee. I. Introduction. II. Properties of steel which affect quality of steel castings, B., 45. Grebe, J. J. Sce Dow Chem. Co.

Grebenchtschikov, B., physical and chemical investigations of sesamé loaf extracts, B., 481.

Grebenschtschikov, I. V., rôle of chemistry in polishing processes, B., 344.

Grebinski, S. O., accumulation of citric acid in makhorka (Nicotiana rustica, L.), A., III, 189.

Grechnev, M. See Tischtsehenko, V.

Gredy, (Mile.) B., Raman spectra of ethylenic compounds of the general formula CHEt.CHR; comparison with the compounds CH₂:CHR and CHMe:CHR, A., I, 219.

Greeley, P. O. See Drury, D. R.

Green, A. A. See Cohn, E. J., and Mc-Khann, C. F.

Green, A. B., running of [paper mill] beaters, B., 768.

Green, A. T. See Clews, F. H., and Rowden, E.

Green, D. E., malic dehydrogenase of animal tissues, A., III, 29.

and Dewan, J. G., reversible oxidation and reduction of co-enzyme I, A., III,

Dewan, J. G., and Leloir, L. F., β hydroxybutyric dehydrogenase of animal tissues, A., III, 311.

and Richter, D., adrenaline and adrenochrome, A., II, 207.

and Williamson, S., pyruvic and oxaloacetic eyanohydrins, A., II, 180. See also Dewan, J. G.

Green, E. S. See Hall, Ltd., J. & E.

Green, H., Mitchell, C. R., and Yorston, F. H., pulping of hardwoods by the sulphite process. II. Softness and opacity in hardwood sulphite pulps, B., 425.

Green, H. C., and Kelco Co., alginic acid, (P.), B., 421.

See also Clark, D. E.

Green, J. B., and Loring, R. A., Paschen-Back effect: 2S2P multiplets in strong fields, A., I, 54.

and Maxwell, H. N., Zeeman effect of

N II, A., I, 207. Green, J. F. See Bradt, W. E. Green, J. W., and Pacsu, E., glucofuranosides and thioglucofuranosides. I. Preparation and its application to galactose and glucosc, A., II, 368.

Green, L. See Emerson, R. Green, L. D. See Calloway, N. O.

Green, L. G. See Brown, T. F. K. Green, R. A. See Davies, R. J.

Green, T. G., and Hilditch, T. P., oxidation of some polyhydroxylic and polyethylenic higher fatty acids by aqueous alkaline permanganate solutions, A., II, 273. Nature of antioxygens present in natural fats. III. Occurrence of antioxygenic compounds in extracted soya-bean oilcake, B., 255.

Hilditch, T. P., and Stainsby, W. J., seed wax of Simmondsia Californica, A., III, 107.

Green, W., reconditioning crossote oil for benzol absorption, B., 1002.

Greenawalt, J. E., incinerating furnace [for garbage], (P.), B., 194. [Ignition] furnaces, (P.), B., 300. Incinerating [sintering] furnaces, (P.), B., 300.

Greenawalt Incinerating Corporation. See

Leftwich, R. F.

Greenbaum, F. R., admixture of sodium morrhuate and quinine solutions, (P).. B., 843. Iodination and chlorination of vegetable and animal oils, B., 1235. Pharmaceutical solutions [from sodium morrhuate and quinine], (P.), B., 1274*.

and Nat. Drug Co., mixture and method of admixing sodium morrhuate and quinine solution, (P.), B., 499.

Greenberg, D. M. See Larson, C. E.
Greenberg, L. A. See Haggard, H. W.
Greenberg, L. D., Rinehart, J. F., and
Phatak, N. M., reduced ascorbic acid content of blood-plasma, A., III, 104. See also Rinehart, J. F.

Greenberg, M. M. See Moore, R. M. Greene, A. E., electric reduction furnace,

(P.), B., 149. Greene, C. H., solubility of barium nitrate in concentrated nitric acid, A., I, 456.

Greene, H., [report of] Gezira chemical section, B., 164. Soil problems of the Anglo-Egyptian Sudan, B., 952.

Greene, L., ringing and fruit setting as related to nitrogen and carbohydrate content of Grimes Golden apples, B.,

Greene, L. W., chemical microscopy of fats and waxes. III. Castor oil, B., 463. Greene, O. V. See Luerssen, G. V.

Greene, R. A., and Williams, J. A., hydrocyanic acid in glucoside-bearing materials, B., 284.

Greene, R. D., and Black, A., crystalline vitamin-B1 from natural sources, A., III,

Greene, R. R., and Ivy, A. C., experimental production of intersexuality in the female rat with testosterone, A., III,

See also Danforth, D. N.

Greene, T. W., oxyacetylene welded [metal] pipe-lines, B., 1352.

Greene, IV. S., test climinates excuse for filthy butter, B., 180.

Greenewalt, C. H., and Du Pont Rayon Co., keten, (P.), B., 1021.

See also Du Pont de Nemours & Co., E. I. Greenfield, G. J., and Dummett, G. A., determining moisture content of small coal, B., 744.

Greengard, H. See Ferguson, John. Greenhill, A. W., chemical composition of intensively managed pasture, B., 272. Yield and composition of cut pasture herbage at different times of the day, B.,

Greenhill, W. L., difference between drying rates at entering and leaving air sides of kiln charge of timber, B., 244. Shrinkage of Australian timbers. I. Determining shrinkage and shrinkage figures for a number of Australian species, B., 348. Design of the circulating system of commercial timberseasoning kilns, B., 1056.

See also Thomas, A. J. Greeninger, A. B., crystallisation of copper, A., I, 16.

Greenleaf, C. A., nomograph for calculation of volume of tomato pulp, B., 614.

Greensfelder, B. S. See Shell Development Co.

Greenslade, R. M. See Massee, A. M. Greenspan, E. B. See Epstein, E. Z.

Greenspan, J., La Mer, V. K., and Liotta, S., semi-micro gas evolution apparatus applied to kinetic studies in heavy water, A., I, 583.

See also La Mer, V. K.

Greenstein, J. P., multivalent amino-acids and peptides. VII. Derivatives of dl-a-aminotricarballylic acid. VIII. Synthesis of bisanhydro-l-cystinyl-lcystine and other diketopiperazines of cystine. IX. Synthesis of l-cystinyll-cystine, A., II, 53, 262, 488. See also Cohn, E.J.

Greenup, H. W., and Olcott, L. E., latex

battery separators; preparation and properties, B., 582.
Greenwald, C. K. See Buxbaum, E.
Greenwald, H. P., and Howarth, H. C., tests of the compressibility and bearing strength of potash salt, B., 903.

Greenwell, (Sir) B. E., drying of grass and crops generally, (P.), B., 1405. Greenwood, A. D. Sco Bennet-Clark,

Greenwood, A. W., and Blyth, J. S. S., relation between site of injection of androsterone and the comb response of the fowl, A., III, 229.

Greenwood, G., pyroelectric behaviour of pierie acid crystals, A., I, 449.

Greenwood, H., tensile properties of a series of white-metal bearing alloys at elevated temperatures, B., 1065. Greenwood, James. See Greenwood, John.

Greenwood, John, Greenwood, James, and Holgate, J. B., sieving machines [pneumatic shaking screens] for cereal pro-

ducts, (P.), B., 1130.

Greenwood, J. N., failure of lead by creep,
B., 50. Influence of service conditions on metal components of industrial

plant, B., 927.

and Worner, H. K., influence of impurities on properties of lead. VI. Influence of tellurium on the creep rate of commercial lead, B., 144.

Greep, R. O. See Fevold, H. L. Greer, P. S. See Union Carbide & Carbon Corp.

Greetie, D. P. See Jensen, L. B.
Greeves, F. D. See Emeléus, K. G.
Greeves, T. N., control of blight (Phylophthora infestans) in seed potatoes by tuber disinfection, B., 959.

See also Cairns, H. Gregerson, H. J., Clark, A. R., and Kurzrok, R., gonadotropic antihormones, A., III, 102.

Gregg, A. H., Hampson, G. C., Jenkins, G. L., Jones, P. L. F., and Sutton, L. E., electric diffraction investigation of some

inorganic halides, A., I, 448. Gregg, A. W., Frank, R. H., and Bonney-Floyd Co., differentially heat-treated cast-steel wheel, (P.), B., 249.

Gregg, D. C. See Iddles, H. A. Grégoire, A. See Vellinger, E.

Grégoire, F., uses and standardisation of petroleum products, B., 85.

Grégoire, P. E., action of thyroxine on muscle-glycolysis; fermentable, reduc-ing sugar during glycolysis, A., III,

Gregor, M. J. F., disease of cherry laurel caused by Trochila laurocerasi (Desm.), Fr., B., 713.

Gregory, F. G., and Purvis, O. N., devernalisation of winter rye by high temperature, B., 167. Vernalisation of winter

rye during ripening, B., 167. and Sen, P. K., physiology of plant nutrition. VI. Relation of respiration rate to carbohydrate and nitrogen metabolism of the barley leaf as determined by nitrogen and potassium deficiency, A., III, 442.

Gregory, H. S., and Stephens, R. W. B., temperature drop effect in relation to determination of molecular heat of gases, A., I, 125.

Gregory, L. B., and Scharmann, W. G., carbon dioxide scrubbing by amine solutions, B., 906.

Gregory, L. S., and Price, H. C., gas-converting furnace, (P.), B., 738. See also Schulze, W. A.

Gregory, P. H., control of white mould disease of narcissus, B., 171. See also Davidson, A. M.

Gregory, P. W. See Goss, H., and Lerner, I. M.

Gregory, R. A., and Lee, D. H. K., effect of water intake on human reactions to reduced cooling powers, A., III, 114.

Gregory, T. G. See Bleeh, W. Gregory, T. R., and Kimball, J. H., cannery waste at Palo Alto (California), B., 1414. Greider, H. W., and Carey Manufg. Co., P.,

heat-insulating material, (P.), B., 1145. and Fasold, G. A., abrasion test methods for embedding of granular mineral surfacing on asphalt roofing, B., 676.

Greif, P. See Abderhalden, E. Greig, J. L., chemical eradication of lalang grass, B., 1388.

Greig, M. E. See Elliott, K. A. C. Greigov, E. S., blanc fixe, B., 809.

Greisheimer, E. M., and Goldsworthy, E., glycogen and water storage, A., III, 56. Greninger, A. B., lattice relationships developed by peritectic formation of

bela in the copper-zinc system, A., I, 508. Microscopical study of ancient bronze and copper, B., 570.Gresham, H. E., treatment of porous

metals [aluminium alloy castings], (P.), B., 252.

Gresham, T. L. See Dolliver, M. A.
Gresser, E. B. See Ralli, E. P.
Gressner, A., sulphonation of oils and
greases, (P.), B., 697.

Gretener, E., theory and technique of the Berthon-Siemens colour-film process, B., 1137.

Grether, E. F. See Dow Chemical Co.
Gretschni, J. V., regularities in composition of mineral gases, A., I, 269. Composition and nature of organic composition and nature of organic compounds in gasiferous clays of the Melitopol district, A., I, 333.

Grettie, D. P. See Industrial Patents Corp. Greve, E. W., effects of nitrogen fertiliser and of irrigation on growth and blossoming of the Howard 17 strawberry, B., 601.

Greville, G. D. See Boyland, E. Grewe, H., "calculation of the error" in collaboration work in the field of steelworks chemistry, B., 447.

Griaznov, I. M., electrolytic etching of micro-sections of stainless steels, B., 578. Pressed and cast hard alloys with a tungsten base, B., 796.

Gribkova, S., variation of velocity of detonation waves with temperature and water content of explosive mixtures, A., 1, 189. Gribkova, V. I. See Uschakov, S. N.

Gribnau, F. B., absorption and scattering of light in hydrophobic colloids. A., I, 78.

Krom, C. J., and Kruyt, H. R., light pressure and photophoresis in colloidal

solutions, A., I, 361. Gribova, E. I. See Shukov, I. I. Griebel, C., rapid differentiation of ordinary and caffein-free coffee, B., 388.

and Zeglin, H., detection of small amounts of pectin in quark, B., 1126. Griem, W. B., biological methods for assay of vitamin-D carriers, A., III, 79.

Griendt, G. H. van de, and Engs, W., alcohols, (P.), B., 1310.
Grieneisen, H. See Fischer, W.

Grierson, G. A. H., rubber-lined pumps, (P.), B., 307.

Griesshaber, H. See Wagner-Jauregg, T. Grieve, J. L., and Rule, H. G., oxidation products of benzanthrone-8-carboxylic acid, A., II, 246.

Griffen, J., Rheslaveur coal-cleaning process, B., 101.Griffin, A. E., use of copper and chloro-

amines in water purification, B., 504.

Griffin, A. M. See Stuart, C. A. Griffin, H. H., Burgeni, A., and Wallwood Corp., reducing the shrinkage of wood, (P.), B., 1210. Griffin, H. K., and Storch, H. H., apparatus

for precise plasticity measurements at high temperatures; data on coal plasticity, B., 859. Griffis, R. O. See Hayes, A. H.

Griffith, C. L., Hall, L. A., and Griffith Labs., solid seasoning composition containing lecithin, (P.), B., 391.

Griffith, F. E. See Craig, W. A. Griffith, M., improvement of hill grazings; Cahn Hill experiments, B., 838.

Griffith, M. E., influence of position isomerism in azo-dyes on their fastness

to light and washing, B., 762. and Brode, W. R., influence of position isomerism (structural differences) in azo-dyes on their fastness to light and washing, B., 23.

Griffith, R. H., catalysis in hydrocarbon chemistry. V. Promoter concentrations. VI. Conversion of phenol into benzene. VII. Carrier action and molecular size, A., I, 253.

and Hill, S. G., catalysis in hydrocarbon chemistry. IV. Adsorption of hexane on catalysts, A., I, 253.

Hill, S. G., and Plant, J. H. G., reduction of chromium oxide, A., I, 623. Griffith, R. O., and McKeown, A., reactivity of hydrogen peroxide in bromine-

bromide solutions, A., I, 87. Griffith, W. O. See Sachs, A.

Griffith Laboratories, Inc., forming a meat-curing salt product, (P.), B., 84. Meat-curing substances, (P.), B., 84. See also Griffith, C. L.

Griffiths, E., simple forms of automatic regulators, B., 96. Thermal conductivity of insulating materials and methods of testing, B., 735.

Morgan, W. L., Allman, S. L., and McCulloch, R. N., arsenicals in agriculture, B., 1107.

See also Sherratt, G. G. Griffiths, E. P., and Shrader, L. C., bloodsugar determinations in certain cases

of diabetes, A., III, 13.
Griffiths, F. P., bacteriology of fresh marine-fishery products, B., 974. See also Lemon, J. M.

Griffiths, J. G. A., quantitative microscopical analysis of feeding-stuffs. I. Determination of rye, wheat, and barley starches in mixtures; "ground oats" mixtures, B., 1128. "Resins" and "pitch" from ancient Egyptian

tombs, B., 1370. Griffiths, J. H. E., and Szilard, L., γ -rays excited by capture of neutrons, A., I,

Griffiths, J.P., and Waters, E.T., utilisation of fructose in the mammalian organism as shown by experiments on hepatectomised and eviscerated preparations, A., III, 260.

See also Warne & Co., W.

Griffiths, W. J., duodenum and automatic control of gastric acidity, A., III,

See also De Wesselow, O. L. V. Griffiths, W. T., and Pfeil, L. B., heatresistant alloys, (P.), B., 456.

Griffitts, F. A., and Brown, O. W., catalytic activity of cobalt sulphide for gas-phase reduction of nitrobenzene to aniline, B., 647.

Grigaut, A. See Coste, F. Griggs, A. R., carbonisation of coal and like

carbonaceous material, (P.), B., 1008. Griggs, D. T., fatigue in rock exfoliation, A., I, 155.

Griggs, H. P., low-intensity solarisation of four emulsions, A., I, 317.

Grignani, E., composition of Sicilian must concentrates, B., 1116.

Grigor, J. See Imperial Chem. Industries. Grigoriev, chromite lining for industrial furnaces, B., 440. Magnesite lining for cement kilns, B., 442.

Grigoriev, B. A. See Adadurov, I. E. Grigoriev, D. P., crystallisation of rhombic and monoclinic pyroxenes from artificial silicate melts, A., I, 204.

and Iskull, E. W., regeneration of amphiboles from their melts at normal pressure, A., I, 383.

Grigoriev, N. K. See Isgarischev, N. A. Grigoriev, P. N., rapid determination of calcium and magnesium oxides, A.. I, 476.

and Bargteil, S., concrete structures to resist water and petroleum, B., 554. and Koshina, E. I., accelerated analysis

of Portland cement, B., 1054. and Posharskaja, P. I., determination

of silicic acid in presence of organic colloids, A., I, 325.

Grigorovitsch, N. M. See Adadurov, I. E.

Grigorovski, A. M. See Magidson, O. J. Grill, E., molybdenite from Monte Mulat (Predazzo), B., 1065.

Grillet, L., broadening of the green line (5461 A Hg) in high-pressure mercuryvapour arcs, A., I, 158.

See also Jausseran, C. Grim, R. E., and Bray, R. H., mineral constitution of various ceramic clays,

Bray, R. H., and Bradley, W. F., mica in argillaceous sediments, A., I, 588. Constitution of bond clays and its

influence on bonding properties, B., 549. See also Bray, R. H.

Grimaldi, (Signa.) G. See Neri, A.

Grimard, L., technique for investigation and determination of trephones, A., III, 447.

See also Nattan-Larrier, L.

Grimaud, G., use of automatic measuring tanks for [sugar-beet] diffusion [juice], B., 1109.

See also Pérard, J.

Grimberg, A., Mutermilch, S., and Agasse-Lafont, E., inhibitory action of sodium eitrate on bactericidal power of human blood, A., III, 72.

Mutermilch, S., Agasse-Lafont, E., and Pellier, H., mechanism of bacteriolysis

in vitro, A., III, 317.
Grimes, M. See Droma, L. O., and Treichler, R.

Grimlund, K., effects of lactic, pyruvic, succinic, fumaric, and glycerophosphoric acids on activity of frog muscle and heart poisoned with bromoacetic acid, A., III, 310.

Grimm, H. See Ziegler, K. Grimm, H. G., periodic system of chemical compounds of the type $A_m B_n$, A., I, 397.

Grimm, J. See Krüger, W.

Grimm, R., determination of free calcium hydroxide in set cement and cementtrass mixtures and combined lime in lime-trass mixtures, B., 242.

Grimmer, W., Eckardt, B., and Geidel, W., [milk-]separator slime, B., 1260.

Grimmett, L. G., and Rann, W. H., film camera, with cathode-ray oscillograph, for experiments on artificial radio-

activity, A., I, 266. Grimmett, R. E. R., McIntosh, I. G., Wall, E. M., and Hopkirk, C. S. M., chronic zinc poisoning of pigs [due to] feeding of zinc lactate, A., III, 479.

See also Aston, B. C.

Grimshaw, G. E., backing up refractories with insulating material, B., 913.

Grimshaw, L. C., diffusion of carbon from steel into iron, B., 1348. Diffusion [of carbon] through ferrous welds of duoclad metals, B., 1352.

Grinbaum, (Miss) R., and Marchlewski, L., absorption of ultra-violet light by organic substances. XLI. Gossypol. XLII. Datiscetin, morin, and quercetin, A., I, 166, 343. Absorption spectra of datiscetin, morin, and quercetin, A., I, 280.

Grinbaumówna, R. See under Grinbaum, (Miss) R.

Grindler, B. F., further experiments at

Kuzbas, B., 639. Gring, J. L. See Clark, G. L.

Grinnell, S. W. See Rysselberghe, P.

Grinstein, M., properties of blood-albumin of the horse, A., III, 2.

Grischin, N. A. See Kaplan, S. I. Griscom-Russell Co. See Ris, K. B.

Grisel, F., passage of water under constant pressure through a mass of concrete, B., 348.

Grisenthwaite, A. T. See Power-Gas Corp.

Grisewood, E. N. See Bacon, R. H. Griswold, E., and Olson, F. V., solubility relations in the system lead acetatesodium acetate-acetic acid at 30°, A., I, 617.

Griswold, J., Baumé hydrometer correction table for sodium hydroxide solutions, A.,

Grivet, (Mme.) T. See Auger, P.

Grjanenko, K. See Poljakov, M. V. Grob, J. J., Hell Gate spray zone gas washer, B., 1155.

Grodzinski, P., extrusion process for thermosetting moulding powders, B., 368.

Grodzovski, M. K., mechanism of the catalytic oxidation of sulphur dioxide in a solution of manganese salts, A., I, 571. Action of ozone on solutions of manganous salts, A., I, 571. Gröber, H. See Bollenrath, F.

Grøgaard, L., adaptation of sulphite cooking process to intensive afforestation, B., 226. Groen, J., and Taylor, F. H. L., absorption of iron compounds from upper part of the small intestine, A., III, 423.

Grönblom, B. O., first deviation of the ¹He and ¹ O nuclei from the Hartree model, A., I, 492.

Groetzinger, G., increase of negative photophoresis by a high-frequency electric field, A., I, 614.

and Kretch, H., permanent polarisation of electrets, A., 1, 11. and Lichtschein, J., volume rectification

effect in illuminated crystals of cuprous

oxide, A., I, 283. Groggins, P. H., Pitman, A. L., McLaren, J., and Davis, F. H., electrochemical production of sodium chlorate, B., 902. Grognot, P. See Grandpierre, R.

Gróh, J., Szélyes, L., and Weltner, M. [with Bálint, P., Csermák, G., Kovács, J., and Simon, J.], photometric and chemical investigation of blood groups, A., III, 197.

Groll, H. P. A. See Bataafsche Petroleum Maats., and Shell Development Co.

Gromov, B., stabilising solutions of aluminates, B., 340.

Gronbeck, A. C., apparatus for low-temperature distillation, (P.), B., 5.

Gronchi, V., effect of ultra-violet rays on the alcoholic fermentation of Saccharomyces cerevisiæ. I. and II., A., III, 315. Grondijs, H. F., and Schouten, C., Mount Isa ores, A., I, 586.

Groner, M. G., respiration of green and chlorophyll-deficient types in maize, A., III, 240. Amino-nitrogen and reducing sugars of green and chlorophyll-deficient types of maize, A., III, 408.

Gronow, H. E. von, heat of formation of tricalcium silicate at 1300°, A., I, 244. Thermochemical basis of cement manufacture, B., 674. Special cements for preparation of mass concrete, B., 674. "Reduced shrinkage" of cement and the bulk density of the clinker, B., 674. and Honus, O. F., thermochemistry of cement, B., 242.

and Schwiete, H. E., calculation of exothermic effect in formation of Portland cement from composition of burned clinker, B., 552.

Gronwall, T. H., helium wave equation, A., I, 278.

Gronych, O. See Brass, K. Groom, E. J., hot-dipped aluminium-coated [steel] sheet, B., 1351.

Groombridge, W. H. See Brit. Celanese. Gropp, F., fuel and heat requirements in drying crude brown coal with furnace gases [from a steam boiler], B., 859.

Gropper, L., quantum theory of equation of state at low temperatures, A., I, 71.

Quantum theory of the second virial coefficient, A., I, 124. Connexion between the second virial coefficient and the phases of collision theory, A., I, 453. Gros, G. See Courrier, R.

Groschev, L., fourth radioactive family with at. wts. 4n+1, A., I, 592.

Grosholtz, R., viscosity conversion charts, B., 753.

Grosjean, J., and Lewkowitsch, P. R. E., continuous vacuum distillation of high b.p. products, (P.), B., 306.

Gross, B., hard component of cosmic rays, A., I, 109. Analysis of absorption curves of ultra-radiation, A., I, 277. Latitude effect of ultra-radiation, A., I, 390.

Gross, E., and Komarov, E., Raman spectra of low frequencies and intermolecular forces, A., I, 497.

and ∇uks , M., type of diffusion spectrum of crystals and structure of liquids, A., I, 283. Influence of temperature on the continuous spectrum in the neighbourhood of the Rayleigh line, A., I, 345.

Gross, F. See Büssem, W.
Gross, H., and Seitz, G., production of
electron-optical structure images with photo-electrons, A., I, 402.

Gross, H. H. See Texas Co. Gross, K., printing ink, (P.), B., 701. Gross, M. See Reinhold, J.

Gross, O., use of electric heating in chemical industry and related problems, B.,

Gross, P., Steiner, H., and Krauss, F., micro-method for measuring rate of decomposition of diazoacetic esters, A., II, 530.

Gross, P. M. See Darkis, F. R., and Rintelen, J. C., jun.

Gross, R., recent electric [metal-]melting furnaces, B., 1211.

Gross, R. F. J., and Hickling, A., electrolytic oxidation. IX. Anodic oxidation of chromic salts to chromates, A., I, 192.

Gross, W. See Haehn, H., and Ohle, Heinz. Gross, W. H. See Dow Chem. Co. Grossberg, I., manufacture of compounds

of dimethylxanthines, (P.), B., 1408. Grosse, A. von, the row of increasing at.

wts. and the periodic law, A., I, 592. and Ipatiev, V. N., metal halide catalysts for hydrocarbon reactions, A., II, 283. See also Ipatiev, V. N., and Universal

Oil Products Co.

Grosse, W. See Butenandt, A.

Grosse-Brockhoff, F., and Schoedel, W. [with Hampel, A.], apparatus for studying changes in expired air during expiration, A., III, 163.
Schoedel, W., and Springorum, W., re-

spiration and gaseous metabolism in the initial stages of physical work, A., III, 465.

See also Brüner, H.

Grosse-Oetringhaus. H. See Kaufmann, H. P.

Grossenbacher, K. A., and Livingston, B. E., cryptotrophic malnutrition of sorghum in solution culture, A., III, 237.

Grosser, G., changes in chemistry of eruptive rocks by weathering, A., I, 206. Grossfeld, H., permeability of cells of tissues grown in vitro, A., III, 132.

Grossfeld, J., determination of fat with definite amounts of solvent, B., 584. Detection of small amounts of butter fat in coconut oil, B., 586. Calculation of egg-yolk content [of food-stuffs] from total and lecithin-phosphoric acid, B., 613. Identification of oils of Cruciferæ in food oils, B., 807.

and Payfer, R., maple syrup, B., 1126. Grossi, C., and Mancinelli, P., trisodium phosphate for climinating lime from clarified [sugar] juice, B., 1392.

Grossman, F., homogenising agents for production of fuel mixtures based on alcohol, B., 517.

Grossmann, \hat{H} ., dependence of B. coli spore content of drinking-water samples on amount of local precipitation, B., 192.

Grossmann, O. See Lukeš, R. Grote, H. W., easy-flowing gas black, B.,

and United Carbon Co., forming agglomerated carbon black, (P.), B., 643.

Grote, IV. See Edeleann Ges.m.b.H.
Grotefeld, A. IV. See Perry, H.
Groth, W., photochemical investigations
in the Schumann ultra-violet. III. Further development of low-voltage xenen lamp; quantum yields of photochemical gas reactions in wave-length region below 1500 A. IV. Photochemical oxidation of carbon monoxide, and carbon monoxide as sensitiser, A., I,

and Laudenklos, H., mechanism of photochemical decomposition of methane, A., I, 91.

Grothe, H., and Savelsberg, W., determination of lithium, A., I, 531.

Grotlisch, V., colour grades for turpentine, B., 1238.

Grout, F. F., gold prospects of Minnesota, B., 571.

Grout, J. R., jun., new-process North Carolina kaolin refinery, B., 1339. Grover, H. J., positive ion work function

of molybdenum, A., I, 541. Grover, M.L. See Staff, E.J.

Groves, K., Marshall, R. E., Overley, F. L., and St. John, J. L., removal of fluorine spray residue from apples sprayed with natural cryolite, B., 81.

See also Marshall, R. E. Groves, L. G., and Sugden, S., dipole moments of vapours. III. Homologous

series, A., I, 115.
Groves, W. W. See I. G. Farbenind.
Growdon, L. R. See Mead Corp.
Grower, R. M., and Tomasello, S. J., bituminous paving composition, (P.), B.,

Gruart, A. H., alginates [from seaweed], (P.), B., 118.

Grube, G., and Gu, B., electrochemical behaviour of rhodium. II. Higher oxidation states of rhodium, A., I,

and Mayer, K. H., electrochemical behaviour of rhodium. III. Potentiometric titration of the higher oxidation states of rhodium in acid solution, A., I, 419.

Gruber, C. M. See Brundage, J. T.

Gruber, H. See Boedecker, F. Seo Zobrist, L.

Gruber, M. Gruber, R. See Müller, W. J. Gruber, W. See Spath, E.

Grubitsch, H., apparatus for corrosion tests with slowly flowing liquids over long periods, B., 354. Theoretical bases of hot-galvanising [of metals], B., 570. Strength of adherence and flexibility of hot zinc-coated sheet, B., 1220.

and Brückner, F., coating thickness, behaviour on bending, and spangle of galvanised sheets, B., 1348.

See also Jantsch, G.

Grün, R., trass cement and blast-furnace cement, B., 553. Danger to coal silos from coal containing sulphur, B., 743. Confusion regarding cementitious lime, B., 1343.

Grün, R., and Obenauer, K., determination of free calcium hydroxide in set cement and cement-trass mixtures and combined lime in lime-trass mixtures, B., 242.

Grünbaum, A. See Snapper, I. Grünbaum, F. See Isamat, F.

Grünberg, A. A., physical chemistry of

complex compounds, A., I, 397. and Riabtschikov, D. I., application of oxidation-reduction potentiometric titration to the determination of the constitution of complex compounds,

A., I, 246.
and Volstein, L. M., complex compounds of bivalent platinum with

glycine, A., II, 330.

Gründer, W., and Heller, M., measurement of finest grains of single substances and mixtures by sieving and elutriation processes, B., 508.

and Sauer, H., determination of size distribution curves and surface of comminuted materials, exemplified by

flour, A., I, 409.

Grüneisen, E., and Adenstedt, H., anisotropy of heat-conductivity and thermoelectric force in metals (tungsten) in transverse magnetic fields at 20° abs., A., I, 450.

and Gielessen, J., bismuth crystals. III. Thermal and electrical conductivity in transition from transverse to longitudinal magnetic field. IV. Alteration of the thermo-electric power on transition from transverse to longitudinal magnetic field, A., I, 121, 292.

Grüner, G. See Böhm, F.

Grüner, V., determination of amount of colloids in agar solutions, B., 618. and Tauson, N., determination of

tensile strength of gels of agar and agaroids by the Valenta apparatus, B., 704.

Grüning, IV., iron hydroxide in pharm-

accutical preparations, B., 618.

Grünler, S. See Helferich, B.

Grünsteidl, E., and Stobiecki, T., microstatistical detection of falsification of powdery substances, illustrated by adulteration of ground black pepper with peppercorn husks, B., 837.

Grünwald, O., and Weiss, E. E., medium for removal of hair or wool, (P.), B.,

Gruhzit, O. M., Dox, A. W., Rowe, L. W., and Dodd, M. C., pharmacology of thiobarbiturates, A., III, 350.

Lindsay, W. D., Hendricks, G., and Dodd, M. C., mapharsen ("arsenoxide") in the therapy of experimental archibic and transposite in A. III. syphilis and trypanosomiasis, A., III,

Grullemans, J. J., and Wayside Gardens Co., bed material for flower bulbs, (P.), B., 172.

Grum-Grshimailo, N. V., granular structure of steels, B., 445.

Grum-Grshimailo, S. See Vedenejeva,

Grumbach, A., and Taboury, M.-F., behaviour of cells in which one electrode is polished; rôle of the Beilby layer, A., I, 310.

and Vidal, P., preparation of semipermeable membranes, A., I. 202. Grumell, E. S. Seo Dunningham, A. C.

Grumpelt Propellerbau Ges.m.b.H., uniting sprayed metal to wood, (P.), B., 678.

Grundmann, C., vinylene homologues of glutaconic acid, A., II, 273.

and Takeda, Y., bacterial carotenoid, leprotin, A., III, 100.

See also Kuhn, R.

Grundström, B., band spectrum of thallium hydride, A., I, 547.

Grundy, J. G., properties of dyes in relation to garment dyeing, B., 1038.

Gruner, E., and Klemm, W., magnetic properties of silver difluoride, A., I, 122.

Gruner, J. W., structure of serpentines, A., I, 270. Hydrothermal leaching of iron ores of the Lake Superior type a modified theory, A., I, 382. Structure of stilpnomelane, A., I, 434. Densities and structural relationships of kaolinites and anauxites, A., I, 586.

and Thiel, G. A., occurrence of finegrained authigenic felspar in shales

and silts, A., I, 586.

Grunert, A., Hessenbruch, W., and Schistel, K., high-temperature-resistant chromium-aluminium-iron alloys with and without cobalt, B., 563.

Grunfeld, M., action of sodamide and alkyl halides on N-arylformimino-

ethers, A., II, 237.

See also Ramart-Lucas, (Mme.) P. Grnnow, H. See Leuchs, H.

Gruntfest, I. J. Sec Foster, L. S.

Grupe, W. F., gold leaf and similar foils, (P.), B., 253. Manufacture of metal leaf

and metallised paper, (P.), B., 1362.

Gruschwitz, K. H. See Peyer, W.

Gruse, W. A. See Hjerpe, E. B., and
Stevens, D. R.

Grusch, B. and Stevens, D. R.

Gruskin, B., and Lakeland Foundation,

pregnancy antigen, (P.), B., 621.
Gruzdeva, Z., pulp bleaching under conditions of the Kondrovski paper mill, B., 26.

See also Laube, A. G.

Gruzewska, Z., variations in alkali reserve and its effect on liver function, A., III, 472.

and Roussel, G., copper in liver-proteins, A., III, 375.

Grzeskowiak, T. See Krause, A.

Grzymek, J., and Kuczyński, T., paragenesis of potassium and magnesium, A., I, 270. Gn, B. See Grube, G.

Guagenty, M. See Vosburgh, W. C. Gualtierotti, T. See Bergami, G.

Guanzon, G. A., and Fernandez, H. B., composition and exhaustibility of Lafeuille and U-crystalliser molasses, B., 961.

Guaresehi, P., calculation of latent heats of evaporation, A., I, 70. Viscosity of liquids. II., A., I, 72. Viscosity of gases, A., I, 72. Association coefficients and their variation as a function of temperature, A., I, 602. Rapid and approximate calculation of specific heats of liquids, A., I, 607.

Gubelmann, I. See Du Pont de Nemours & Co., E. I.

Guberman, E. I. See Ruckelman, A. A. Guberniev, M. A., and Tovarnitski, V. I., contents of essential amino-acids in proteins of different varieties of soya beans, A., III, 244.

Gubkin, S. I., and Zacharov, P. A., composition-mechanical property diagrams of the system copper-zinc, A., I,

Gucker, F. T., jun., and Ayres, F. D., specific heats of aqueous sucrose solutions at 20° and 25° and the apparent molal heat capacity of nonelectrolytes, A., I, 236.

Ayres, F. D., and Rubin, T. R., differential method employing variable heaters for determination of specific heats of solutions, with results for ammonium

nitrate at 25°, A., I, 21. and Munch, R. H., nature of calomel vapour, A., I, 453.

Gudden, B. See Fischer, F.

Gudernatsch, F., specific chemical factors influencing growth and differentiation, A., III, 134.

Gudlet, M., and Kardo-Syssojeva, E. K., oxidation of ascorbic acid (vitamin-C) in

plants, A., III, 232.

Gndtzov, N. T., and Komiakov, P. G., influence of tungsten, nickel, and cobalt on properties of steel for valves of internal-combustion engines, B., 46.

Guében, G., activation of silver by neutrons, A., I, 107. Radioactivity induced in silver by neutrons, A., I, 212.

Güldenpfennig, F. See Holm, R.

Gülich, J., use of brown-coal briquettes for production of town's gas, B., 104.

Guénard, P. See Bruhat, G. Gündel, W., and Pummerer, R., action of aromatic nitroso-compounds on quinones, A., II, 252.

Günter, R., electroplating of aluminium, B., 1359.

Guenther, E. S., oil of parsley, B., 1407. Günther, G. See Adler, Erich, Bonhoeffer, K. F., and Euler, H. von.

Günther, P., and Leichter, H., decom-position of hydrogen iodide and formation of hydrogen bromide under influence of X-rays, A., I, 145.

Gunther, P. L., formation of helium from a-radiators. I. Formation of helium on bombardment of substances with the unfiltered radiation from thorium-B+C, A., I, 276.

Günther-Schulze, A., cathode sputtering of copper in light and heavy hydrogen,

A., I, 446.

and Bär, W., transition from ordinary glow discharge to multi-spark discharge with increasing thickness of electrolytic oxide layer on aluminium, A., I,

and Betz, H., electrolytic valve action with liquid ammonia as solvent, A., I, 168. Comparison of cathode sputtering of pure and oxide-coated magnesium surfaces, A., I, 446. Sparks in electrolytic valve action, A., I, 619.

and Schnitger, H., comparative measurements of normal cathodic discharge constants in light and heavy hydrogen, A., I, 53. Equilibrium $2H_2+O_2 \rightleftharpoons 2H_2O$ in the glow discharge, A., I, 60. Comparative measurements of the anode fall region and optical and electrical thickness of the anode fall region in light and heavy hydrogen, A., 1, 158.

Guerin, H., m.p. and densities of tribasic alkaline-earth orthoarscnates, A., I, 21. Combined action of hydrogen and heat on alkaline-earth arsenates, A., I, 92. Preparation and properties of alkaline-earth arsenates, A., I, 474. Magnesium arsenates, A., I, 526. Combined action of heat and carbon on the alkaline-earth arsenates, A., I, 628.

Gueriui, B., and Soncini, C., lubricant particularly employed for drawing, flanging, and stamping iron, steels, and iron alloys in general, (P.), B., 1166.

Guéron, J., decomposition of aqueous solutions of ferric chloride, A., I, 307. Wall effect in decomposition of aqueous solutions of ferric chloride, A., I, 369.

Guerrant, N. B., Dutcher, R. A., and Brown, R. A., formation of vitamin-Bcomplex in digestive tract of the rat, A., III, 494.

Dutcher, R. A., Tabor, F. S., and Rasmussen, R., vitamin content of canned pincapple juice, B., 836.

See also Rasmussen, R., and Shaw, A. O.

 Guerrera, E. M. See Binaghi, R.
 Guerrero, T. H., and Deulofeu, V., aminoacids. X. α-Methylamino-acids; synthesis of N-methyl-3:4-dihydroxyphenylalanine and related compounds, A., II, 291.

Guerrini, G., influence of photodynamic substances on the ability of Bact. coli to ferment lactose, A., III, 487.

Gürtler, G., effect of heat treatment on silumin castings with and without magnesium, B., 577.

Guertler, IV., economic production of pure alumina from clay and similar substances by the alkaline process, B., 1199. Attainment of the quality of freshly smelted aluminium by suitable treatment of old aluminium, B., 1222. Alloys containing iron, chromium, and aluminium [resistant to scaling], (P.), B., 1225.

and Pirani, M., systems tin-germanium

and tin-beryllium, A., I, 177.
Guest, E. See Haines, W. B.
Guest, W. W., and Schilz, P., crushing

machine, (P.), B., 992.
Guevara, J. de D., analysis of "angel"-fish eggs, A., III, 415.

Gugelmann, W. See Karrer, P. Guggenheim, E. A., elementary deduction of Gibbs' adsorption isotherm, A., I, 25. Theoretical basis of Raoult's law, A., I. 135. Thermodynamics of an activated complex, A., I, 362. Guggenheim, M. See Dietrich, W. F.

Guggenheim Brothers. See Gleason, G. H. Gugliamelli, L., and Franco, M. R., action of aqueous bromine on 2-nitrofluorene, A., II, 373.

Guha, B. C., determination of the atomic parameters in anthraquinone crystals, A., I, 401.

and Ghosh, B., biosynthesis of ascorbic acid, A., III, 78. and Pal, J. C., combined ascorbic acid in

plant tissues, A., III, 282.

See also Chakraborty, R. K., and Sen-

Gupta, P. N.Guha, N. C. See Bose, P. K., and Späth, E.Guha, P. C., and Ganapathi, K., synthesis of trans-s-homopinic acid, A., II, 66.

Ganapathi, K., and Subramanian, V. K., syntheses in the pinane group. III. Synthesis and configuration of pinic acid, A., II, 377.

Ganapathi, K., Subramanian, V. K., and Sankaran, D. K., syntheses in the pinane group. II. Attempted synthesis thesis of pinocamphone and synthesis of trans-s-homopinic acid, A., II, 296. and Krishnamurthy, S., synthesis of

thujane, A., II, 509.

and Nath, B., syntheses in the thujane group. III. Synthesis of thujane, A.,

Guha, P. C., and Sankaran, D. K., syntheses in the carane group. I. Synthesis of 2:2-dimethylcycloheptane-1:3dicarboxylie acid. II. Now synthesis of caronic and homocaronic acid, A., II, 418, 419.

and Subramaniam, K. S., direct synthesis of dihydroisolauronolic and isolauronolic acids, A., II, 498.

Guha, R. C. See Wilson, H. E. C. Guha, S. C. See Sirear, A. C. Guha, S. K., indigoid vat dyes of the isatin II. 3-Indole-1'-(5'-methyl)thionaphthenindigos, A., II, 393.

and Basu-Mallick, H., dyes derived from isatin; azines and indigoid vat dyes, A., II, 79.

Guice, R. R. See Ratliff, A. T. Guichard, F., and Kinh, N. K., determination of chlorides in Tonkin milk, B., 489.

Guichard, P., and Soc. Techn. de Construction & de Raffinage, conversion under pressure and in liquid phase of hydrocarbons having high b.p. into hydrocarbons having low b.p., (P.), B., 15.

Guignard, E. G., continuous distilling and fractionating plant for tars and oils, B.,

865.

Guilbert, A., elementary expression of energy affecting a magnetic particle of very small dimensions in a magnetic

field, A., I, 398. Guilbert, F., possible correlation between sugar content of beets and compactness

of soil, B., 170.
Guilbert, H. R., Miller, Robert F., and Hughes, E. H., minimum vitamin-A and carotene requirement of cattle, sheep, and swine, A., III, 493.

See also Kleiber, M.

Guilbert, J. See Pénau, H.
Guillauden, A., glycerol: liberation, recovery, and refining, B., 1077.

Guillaume, $J_{\cdot,\cdot}$ purification of cane juice in

manufacture of white sugar, B., 173.
Guillaumie, M. See Weinberg, M.
Guillaumin, C. O., sodium content of human crythrocytes, A., III, 247.

See also Chabanier, H., and Decourt, J. Guillemet, R., lactic and succinic acids in

breadmaking, B., 1119. and Leroux, H., fermentation of glucose by yeast, A., III, 355.

and Schell, C., fermentable sugars, amylolytic activity, and effect on fermentation in bread-making of malted wheat meal and of bean meal, B., 178. Panary alcoholic fermentation, B., 386.

Guillemin, J. L., respiratory apparatus for protection against noxious gases, (P.), B., 986.

Guillemonat, A., oxidation of cyclohexene and $\Delta \nu_{-}$ and $\Delta \delta_{-}$ nonenes with selenium dioxide, A., II, 405.

Guillerd, A., and Ebrillard, P., persistence of fluorescein in earths; influence of ferruginous formations, A., I, 588.

Guillet, L., recent tendencies in study of mechanical properties of metals and alloys, B., 354.

and Ballay, M., temper-brittleness of

steel, B., 1214.
Guillien, R., electrical birefringence of liquid nitrogen and oxygen, A., I, 13. See also Keesom, W. H.

Guilliermond, A., and Gautheret, R., vital staining of vacuoles by neutral-red, A., III, 334. Property of vegetable cells of excreting neutral-red after accumulating it in their vacuoles, A., III, 355.

Guillot, J. See Vizern, M. Guillot, M., and Geneslay, G., identification, by Debye and Scherrer's method, of constituents of the corrosion patinas of copper, A., I, 145.

and Goldschmidt, B., isotopy of radioiodine and 12 I and ordinary iodine

127I, A., I, 57. and Gwan, O. S., inhibition by alcohols of the effect of acetylcholine and histamine on the isolated intestine of the guinea-pig, A., III, 265.

See also Rosenblum, S.

Guimaraes, D., process of microclinisation, A., I, 52.

Guimarais, J. A., secretagogue and depressor substances in saliva and pancreatic juice, A., III, 120.

See also Feldberg, W.

Guimares, J. R. A., Faria, A., and Bergamin, F., industrial wastes and pollution of inland waters, B., 734.

Guinau, O. A. See De Haas, W. J.

Guinier, A., apparatus for obtaining very intense diffraction diagrams of crystalline powders with monochromatic radiation, A., I, 378.

Gninot, H. M. See Usines de Melle.
Guinzburg, R. H., and Kleinert Rubber
Co., I. B., rubber products, (P.), B., 703.

Guise, H. T. See Enfield Cycle Co. Guiter, H. See Carrière, E.

Guiteras, A. F. Sec Internat. Printing Ink Corp.

Guitton, L., potential of iron in hydrochloric acid, A., I, 84. Potential of iron and other metals in hydrochloric and nitric acids, A., I, 245. Potentiometric methods for predicting corrosion of ferrous alloys, B., 351. Application of potential measurements to the study of metallic corrosion, B.,

See also Portevin, A.

Guittonneau, G., and Chevalier, René, sensitivity of Azotobacter in soil to structure of the monohydroxybenzoic acids, A., Ill, 146. See also Simonnet, H.

Guiva, A. M. Sec Adamovitsch, L. P.

Gulf Oil Corporation. See Ayres, E., Hjerpe, E. B., McAfee, A. M., and Stevens, D. R.

Gulf Oil Corporation of Pennsylvania. See Ostergaard, P., Smith, H. G., and Stevens,

Gulf Refining Co. See Ayres, E.

Gulf Research & Development Corporation. See Ambrose, H. A., Hassler, G. L., Hjerpe, E. B., and Loomis, A. G.

Guli, M. F., and Kolomitschenko, M. A., effect of acid and basic diets on the cathepsin content of organs, A., III,

Ribak, P.J., and Kolomitschenko, M.A., effect of the reaction of fodder on the oxidative processes in horses, A., III,

See also Borshkovski, S. E.

Gulinova, L. \underline{G} . See Budinkov, P. P. Guljaev, A. P., isothermic determination of granular structure of steel, B., 445.

and Belova, A. P., determination of granular structure of steel, B., 792. Gull, H. C., polarographic analysis of magnesium alloys, B., 925.

Gullans, O., comparison of odour-climination treatments [for water], B., 298. Gullette, W. S. See Texas Co.

Gullickson, T. W. See Palmer, L. S. Gumbel, E. J., extreme intervals between

radioactive emissions, A., I, 543. Guminski, K., glow of barrier anodes of aluminium, A., I, 157.

Gummel, H. See Kiese, M.

Gumz, W., non-aqueous vapours as heat carriers in power and heating service. B., I. Possibilities of development of the technique of gasification [of coal], B., 515. Time required for the combustion of coal dust, B., 860. Possible developments in the separation of dust from [flue] gases by the wet method, B., 1143.

Gund, F., application of vat dyes in the unreduced state in dyeing, B., 660, Gunde, B. G. See Godbole, N. N.

Gundermann, E., working data for a horizontal limekiln gas washer, B., 1042. Gundermann, J., Hauffe, K., and Wagner, C., conductivity of cuprous oxide, A., I, 600.

and Wagner, C., transport measurements with cuprous oxide, A., I, 566. Conductivity of cupric oxide, A., I, 600.

Gundermann, Josef, Wergin, W., and Hess, K., nature and occurrence of primary substance in cell walls of vegetable tissue, A., III, 190.

See also Hess, K.

Gunderson, F. L., nutritional economics of dietary calcium, A., III, 307.

Gunderson, T., subconjunctival iron deposits after adrenaline injections, A., III, 183.

Gundlach, H. R., and Central Commercial Co., coloured granules, (P.), B., 1057. Gunn, C., and Venables, P. F. R., deter-

mination of cod-liver oil in extract of malt with cod-liver oil, B., 85.

Gunness, R. C., column performance in the rectification of petroleum, B., 1297. Gunning, H. C., knebelite from Bluebell mine, Kootenay Lake, B.C., A., I, 101.

Gunston, D., and Baker Perkins, Ltd., gas-fired ovens or furnaces, (P.), B., 300.

Guntsch, A., band spectrum of magnesium hydride, A., I, 216, 596. Gupta, A. C. See Chatterji, N. G.

Gupta, J., Raman effect and molecular structure. I. Structure of the guanidinium ion, A., I, 62. Raman spectra of oxalates and oxalato complexes; vibration of dicarboxyl, A., I, 168. Hexaco-ordination of tellurium, molybdenum, and tungsten, A., I, 598. Free rotation in the oxalate group and the resonance bond of carboxyl, A., I, 599.

See also Sirkar, S. C.

Gnpta, J. C. See Chopra, R. N. Gupta, M. P., and Dutt, S., Solanum xanthocarpum, Schard and Wendle. I. Constituents of the oil from the seeds, A., III, 190.

Gupta, R. P. See Prosad, K. Gupta, S. C. S., dehydrogenation and ringtransformation of spiro-hydrocarbons, A., II, 94.

Gupta, S. S. See Singh, B. N.

Gupte, R. D., distribution of temperature and vapour pressure in neighbourhood of a water surface, A., I, 22.

Gurchot, C., apricot seeds as source of dehydrogenases, A., III, 66. and Lowman, A., stable lactic dehydrogenase preparation, A., III, 138.

Gurd, G. W. See Standard Oil Development Co.

Gnrd, M. R., pressor action of a group of amines related to w-aminoacetophenone, A., III, 264. Physiological action of [\$-3:4-]dihydroxyphenylethylamine and sympathol, A., III, 389.

Gurevitsch, A., distribution of flavin in tissues of mammals in relation to residual respiration in presence of cyanides, A., III, 209. Determination of germinative ability by the dinitrobenzene method without direct germination tests. I. and II., A., III, 240. Determining germination of seeds by detecting embryo respiration with dinitrobenzene, A., III, 240. Determination of flavin in invertebrates, A., III, 296.

See also Fontaine, M.
Gurevitsch, A. B. See Miloslavski, N. M.
Gurevitsch, G., term splitting of the hydrogen atom in high electric fields, A., I, Ĩ04.

Gnrevitsch, I. D., and Veitzer, J. I., optics of white mists. I., A., I, 220.

Gurevitsch, M., anatomy and microchemistry of the cottonseed, A., III, 161.

Gurevitsch, M. A., and Kariakina, N. V. X-ray examination of low-tempered blister steel, B., 351.

Gurevitsch, M. L. See Vepritzkaja, V. F. Gurevitsch, M. M., and Tschachrov, L., absolute efficiency of fluorescence of potassium uranyl sulphate, A., I, 113.

Gurevitsch, V. G., colorimetry with a series of standards, A., I, 151.

Kagan, I. B., and Vendt, V. P., rapid determination of benzene, toluene, or xylene in air, B., 92.

Gurin, S., high-vacuum distillation of N-acyl-amino-acid and -polypeptide esters, A., II, 8.

and Segal, C. F., helianthates of aminoacid and polypeptide esters, A., II, 9. Gurjanova, E. N., relaxation effect in

solution of strong electrolytes, A., I, 27. and Pleskov, V. A., physico-chemical properties of solutions in liquefied gases. XV. Conductivity of acids and salts in liquid ammonia, A., I, 83.

Gurney, R. W., and Mott, N. F., trapped electrons in polar crystals, A., I, 550. Gurovitsch, E. I., presence of films on metals, A., I, 511.

Gurvitsch, A., and Gurvitsch, L., mitogenetic secondary radiation, A., I, 168.

Gurvitsch, L. See Gurvitsch, A.
Gurvitsch, T. A., Karjakin, L. I., and
Kraft, V. B., chemical petrographic study of clays, B., 671. See also Kraft, V. B.

Gusak, I. M., enthalpy diagram of nitrogen from 60 to 200 atmospheres, A., I, 354. Guschtschin, G. See Bauman, M.

Gusev, N., iodometric determination of sulphate in natural waters, A., I, 148. Determination of magnesium in natural water by Pfeifer's method, A., I, 149. Determination of hardness of water after Blacher, and determination of calcium

and magnesium, B., 397.
Guskov, V. M., electrometallurgy of aluminium, B., 52.

Guss, C. See Smith, L. I.

Gustafson, F. G., influence of oxygen and carbon dioxide concentrations on respiration of tomato fruits, A., III, 240. Parthenocarpy induced by pollen extracts, A., III, 243. Inducement of fruit development by growth-promoting chemicals, B., 377.

Gustafson, F. G., and Darken, M., upward transport of minerals through the phloem of stems, A., III, 365.

Gustafson, H. See Behrman, A. S. Gustafson, J. K., and Miller, F. S., Kalgoorlie geology re-interpreted, A., I, 483. Gustafson, T., intensities of components of the Stark effect for hydrogen in strong electric fields, A., I, 539.

Gustaisson, C., [enol-betaines; derivatives of 3:5-diketopiperidine], A., II, 386, 516. Gustafsson, G., paramagnetism of copper-

nickel alloys, A., I, 127.
Gustafsson, Y. See Mattson, S.
Gustavson, K. H., theoretical bearings of thermal stability of chrome[-tanned] leather on nature of the chrome-collagen compound, B., 267.

Gustavson, R. G. See Hearon, W. M. Gustin, D. S. See Westinghouse Lamp Co. Gustus, E. L., Meyer, B. K., and Dingle, J. H., relationship of precipitin titres

to gonadotropic inhibitory action of monkey sera, A., III, 73.

Gutehoffnungshütte Oberhausen Akt .- Ges.,

splitting of hydrocarbons, (P.), B., 15. Purification of crude hydrocarbons, (P.) B., 319. Guterman, C. E. F. See O'Leary, K.

Guth, E., viscosity and strength of stretched

rubber, B., 949.

and Mark, H., elasticity of rubber and its connexion with the structural model, B., 814. Crystallisation and thermal effects in stretched rubber, B., 949. Statistical theory of the elasticity of rubber, B., 1245.

and Rogovin, S., solubility and swelling of cellulose and its derivatives. I.,

A., I, 239.

Guthke, J. A. See Ostern, P.

Guthmann, K., colour pyrometer, B., 1142. Guthmann, W. S., and Stieglitz, J., molecular rearrangement of triphenylmethylalkoxyamines, A., II, 13.

Guthrie, A. N., surface ionisation of barium on tungsten, A., I, 541.

Guthrie, E. S., Scheib, B. J., and Stark, C. N., effect of certain factors on keeping quality of butter, B., 1123. See also Sharp, P. F.

Guthrie, F. C., and Nance, J. T., base exchange in soluble Prussian-blues, A.,

I, 457.

Guthrie, J. D., effect of light and of ethylene chlorohydrin on citric acid content of Bryophyllum leaves, A., III, 105. Isolation of citric acid from potato tubers, A., III, 107.

Gutin, S. S., electrical properties of oxide insulation layer on aluminium, B., 54. and Zahgeim, L. N., electric breakdown of colophony in non-uniform fields, B., 460.

Gutina, R. See Fabritziev, B.

Gutiria, V. S., geometrical properties of the carbon tetrahedron, A., I, 116. Geometrical properties of the carbon tetrahedron, and the exaltation of MR of certain diolefines, A., I, 222. and Bujnitzkaja, V. L., hydration of

propylene by means of aqueous sulphuric acid, B., 875.

Gutman, A. B., and Gutman, E. B., Paget's disease; relative constancy of serum phosphatase over periods up to two years, A., III, 59. Calcium: protein ratio in hyperproteinæmia; total diffusible serum-calcium in lympho-granuloma inguinale and mycloma, A., III, 171.

Gutman, A. B., and Gutman, E. B., empirical regression equation relating total serum-calcium to serum-albumin and -globulins, A., III, 413.

See also Flood, C. A. Gutman, E. B. See Flood, C. A., and Gutman, A. B.

Gutman, J., spectrophotometry of hæmolysis, A., III, 293.

Gutman, (Mlle.) J. See Tiffeneau, M. Gutman, M., and Leizerovitsch, G., treatment of pulverised materials, B., 628.

Gutman, S. M. See Rubaschkin, S. E.
Gutner, R., and Tischtschenko, D. V.,
aliphatic chloro-derivatives. V. Catalytic decomposition of βγ-dichlorobutane in presence of steam, A., II, 82. Sec also Dobrjanski, A. F.

Gutnitzkaja, P. M. See Fomin, S. V. Gutschmidt, J., colour of urine in diagnosis, A., III, 88.

and Glet, E., formation of alkaloids in the plant, A., III, 408. See also Glet, E.

Gutt, E. F. See Branke, Y. V.

Guttman, S. A., influence of ultra-violet irradiation on frog and Limulus hearts subjected to potassium excess, A., III, 214. Guttmann, A., tensile strength of nonreinforced concrete, B., 554.

Guy, H. G., thiuram sulphides as repellents to leaf-feeding insects, B., 711.

Guye, C. E., borders of physics and biology; "scientific philosophy," A., III, 247. Guyer, A., Schütze, H., and Weidenmann,

M., thermal properties of vinyl bromide, A., I, 607.

Guyer, J. A., Frey, F. E., Huppke, W. F., and Phillips Petroleum Co., gas-making apparatus, (P.), B., 13.

and Phillips Petroleum Co., hydrocarbon treating process, (P.), B., 646. Conversion of hydrocarbon gases, (P.), B.,

See also Frey, F. E.

Guyon, G., influence of unbalanced fertilisers on growth of wheat, B., 167.

See also Burgevin, H. Guzman, F., and Rial, M., electro-analysis of cobalt with three electrodes, A., I, 150. Gwan, O. S., preparation of a multivalent

antiserum for B. coli, A., III, 250. See also Guillot, M.

Gwan, Y. S. See Peacock, D. H.

Gwosdz, J., development of charging and poking devices for gas producers, B., 8. Withdrawal of ash from gas producers,

Gye, W. E. See Andrewes, C. H.

Gygi, H., [thermal] study of a rotary kiln [for Portland cement clinker], B., 1054.

György, P., growth-promoting activity of lactoflavin administered orally and parenterally, A., III, 103. Determination of lactoflavin and vitamin- B_6 in cows' and human milk, A., III, 104. Cane molasses versus beet molasses as a source of vitamin- $B_{\mathfrak{g}}$ and lactoflavin, A., III, 325.

Gyro Process Co., cracking of hydrocarbon oils, (P.), B., 1010.

See also Petty, E. Gysel, H. See Ruzicka, L. Gyulai, Z. See Frölich, P.

H.

Haag, H. B., toxicity of rotenone, A., III, 95.

Haag, H. B., and Ambrose, A. M., physiological effect of diethylene glycol. II. Toxicity and fate, A., III, 134.

See also Ambrose, A. M.

Haag, I. L. See Grasselli Chem. Co. Haagen-Smit, A. J. See Kögl, F., and Thimann, K. V.

Haalck, H., charge separation in a mass as result of pressure gradient due to application of very high pressures; (origin of the earth's magnetic and electric fields), A., I, 290. Haanappel, T. A. G., transfer of some

drugs into mothers' milk, A., III, 350. Haarmann, W., changed action of medic-

inal substances in hypertonic solution, A., III, 65.

Haas, A. R. C., phosphorus relations of Iemon cuttings grown in solution cultures, A., III, 47. Composition of flowers of citrus varieties, A., III, 243. Nitrogen in relation to the growth of citrus cuttings in solution cultures, A., III, 237. Composition of avocado fruits, A., III, 366. Accumulation of salts in tips of avocado leaves in relation to tip-burn, A., III, 499. Deficiency chloroses in citrus, B., 274. Juice of navel oranges in relation to soil fertilisation, B., 377. Boron-deficiency effects similar in general appearance to bark symptoms of psorosis in citrus, B., 713. Zinc relation in mottle-leaf of citrus, B., 713.

Haas, E., manometrie micro-titration with ferricyanide, A., II, 359. Absorption spectra of dihydropyridine compounds, A., III, 68. Mode of action of the protein of the yellow enzyme, A., III, 218. Haas, H., intake and fixation of mercuric

chloride in wood impregnation, B., 443. Haas, H. T. A., antagonism of narcotics and the analeptics coramine and picro-

toxin, A., III, 266. Haas, J., Adolf, G., and Wintershall A.-G., avoiding setting phenomena in com-

mercially prepared salts, (P.), B., 237. Haas, L. W. See Read, J. W. Haas, R. See Zellstoff-Fabr. Waldhof. Haas, W., investigation of drugs by ash

patterns, B., 187.

Haase, J. W. See Schmidt, J.

Haase, K., Werth, H., and Preussische Bergwerks- & Hütten A.-G., potassium nitrate, (P.), B., 666.

Haase, L. W., soft water and its import-

ance in water supply, B., 985.

and Gad, G., determination of free chlorine in water using dimethyl-p-phenylenediamine, A., I, 43.

Haase, M., dichroic crystals and their application for polarisation filters, A., I, 49. Polarisation filters employing dichroic crystals. A., I, 479.

Haase, R. See Brockmann, H. Habada, M. See Landa, S.

Habann, E., contact device, (P.), B., 55.

Haber, E., apparatus for removing solid or liquid particles from gases or vapours, (P.), B., 308.

Haberland, G., and Blanke, E., attempted syntheses of natural sterols. II. Synthesis of 7-hydroxy-1-keto-2-methyl-1:2:3:4-tetrahydrophenanthrene, A., II, 104.

Haberland, U. See Vorländer, D. Haberlandt, H., Karlik, B., and Przibram, K., fluorescence of fluorite. III. Line fluorescence spectrum. IV. Detection of uranium in fluorites and low-temperature fluorescence, A., I, 264.

Habermann, A., aluminium in high-frequency work, B., 355.

Habers, L., and Tendeloo, H. J. C., ionic equilibrium in milk, A., III, 297.

Habgood, B. J., bonding [of rubber], B., 1378.

See also Imperial Chem. Industries.

Hablützel, J., anomalous expansion of Seignette salt, A., I, 176.

Hachihama, Y., and Onishi, M., bagasse. X. Phenol derivatives isolated from waste acid of the nitric acid pulping process, B., 125.

Hachkovsky, W. F., and Strelkov, P. G., anomalous expansion of zinc and cadmium near the m.p., A., I, 354.

Hackel, J., thermal analysis of binary systems containing glyceryl trinitrate.

I. and II., A., I, 137

Hackel, W., effect of temperature on the dipole conductivity of alcohols, A., I, 221. Dielectric constant and dipole loss of glasses at high frequencies, A., I, 285.

and Wien, M_{\cdot} , dispersion and absorption with ultra-short waves; dioxan-water mixtures as comparison liquids at high

frequency, A., I, 600.

Hackert, R., and Zeyen, K. L., cored or coated electrodes [for welding steel]? B., 451.

Hackl, O., danger of explosion with perchloric acid, A., I, 147. Behaviour of chromium towards 8-hydroxyquinoline, A., I, 377. Micro-testing of silicates for ferrous and ferric oxides, B., 540.

Hackspill, L., thermal decomposition of calcium carbonates, A., I, \$2.

and Borocco, A., preparation of alkali deuterides, A., I, 420. and Wolf, Georges, thermal decom-

position of barium carbonates, A., I, 412.

Hacman, D., collision between light quanta and free electrons, A., I, 213, Hada, T., mercury are rectifier studied by probe electrodes, A., I, 395.

Hadáček, J., and Fink, F., phytosterols, A., II, 148.

See also Fink, F.

Hadamard, (Mlle.) J., dielectric constants of cyclohexane and benzene, A., I, 347.

Haddock, N. H. See Imperial Chem. Industries.

Haddon, E., chemical control [of canesugar factories], B., 379. Determination of sucrose in molasses, B., 380. Chemical control [in cane-sugar factories], B., 960.

Haddon, W. See Exley, W. H.

Haddow, A., and Robinson, A. M., effect of polycyclic hydrocarbons on growth rate of transplantable tumours, A., III, 256.

Scott, C. M., and Scott, J. D., effect of carcinogenic and other hydrocarbons on body growth in the rat, A., III, 256.

Haden, W. R. See Stearns, L. A.

Hadert, H., preservation of wood by paint and impregnation, B., 244. Soya-bean products in varnish and adhesive industries, B., 261.

Hadfield, (Sir) R., and Main, S. A., practical trial of roofing sheets of copper steels and other materials, B., 791. Hadfield, W. A. See Costigan, S. M.

Hadley, F. B., rennet test for detection of mastitis, A., III, 379.

Hadwiger, H., practical experience of gaseous opacifying agents in enamel, B., 547. Influence of metal oxides on acid-resistance of enamel, B., 547.

Haeberle, C. See Juza, R. Haebler, T. von. See Kenny, M.

Häcker, W. [with Hünnerfeld, J.], Nencki's

hæmatoporphyrin, A., III, 259. Häffner, F. See Ziegler, K. Häger, B., impregnation of wood, B., 443.

Haegermann, G., testing cement by using soft mixed mortar, B., 553. Resistance of Portland cements to magnesium sulphate solution, B., 674.

Hägg, G., X-ray and microscopical studies on the nitrided layer in nitriding steels, B., 919.

See also Elander, M.

Hägglund, E., advances in chemistry of lignin, B., 124. Chemical utilisation of wood, B., 244.

[with Ljunggren, S., Nihlen, H., and Sandelin, O.], influence of wood quality on yield and quality of sulphite and sulphate pulp. I., B., 534.

Haehn, H., Glaubitz, M., and Gross, W., fermentability of dextrins; amylo-

hexaose and different yeast species, A., II, 370. Are dextrins fermentable? A., II, 400.

and Leopold, H., aspartase activity of

yeast, A., III, 483. See also Fink, H.

Haehnel, O., durability of concrete structures in soil, B., 40. Phosphate rust protection, B., 793.

Haehnel, Otto, solubility of lithium carbonate in water saturated with carbon dioxide under high pressures and properties of the solutions, A., I, 407.

Hämmerle, W. See Möhler, H.

Haenisch, E. L. See Freed, S. Haenny, C., magnetic birefringence of solutions of rare-earth salts, A., I, 170. See Lange, Herbert, and Hänsel, H.

Wever, F. Haenseler, C. M., and Moyer, T. R., effect of calcium cyanamide on soil microflora, with special reference to certain plant parasites, B., 478.

Haering, D. W., corrosion in refrigeration

plant, B., 1284.
Haeseler, G. See Fink, H.
Häusler, H., action of metals. VI. Action of copper on the heart, A., III,

and Vogel, L., action of metals. IV. Influence of metals on blood clotting, A., III, 5.

Häusser, H. See Schneider, G. G.

Hafter, C. See Verzar, F.
Hafner, P. G., Swinney, R. H., and West,
E. S., determination of hydroxylated acids of fats, A., III, 82.

Hafstad, L. R., Heydenburg, N. P., and Tuve, M. A., widths of nuclear resonance levels and the calibration of ion-beam energies, A., I, 542.

See also Amaldi, E., Rumbaugh, L. H.,

and Tuye, M. A.

Hagedorn, H. C., and Wodstrup-Nielsen,
(Miss) I., insulin preparation, (P.), B., 89. Hagen, C., and Sandhagen, M., distribution of secondary electrons liberated from an aluminium gauze, A., I, 542.

Hagen, H. F., cindervane fan, B., 1143. Hagen, W. See Menzel, H.

Hagenbach, H. See Appel, H. Hagenbuch, W. See Shell Development

Hager, G., and Stollenwerk, W., colorimetric determination of phosphoric acid in soil examination by the Neubauer-

Schneider seedling method, B., 1099. Haggard, H. W., and Greenberg, L. A., effects of alcohol as influenced by blood-

sugar, A., III, 348.

Hagger, O. See Schwarzenbach, G.

Hagisawa, II., hyposulphite. VI. Reduction by zinc amalgam of solutions of sodium hydrogen sulphite, A., I, 576. and Takai, T., potassium hydrogen sulphate, A., I, 185.

See also Maruyama, K., and Murooka, T.

Hagiya, M. See Obinata, I. Haglund, G., and Patentaktieb. Gröndal-Ramén, solutions of alkali sulphites, (P.), B., 778. Apparatus for producing solutions, (P.), B., 778.

Hagopian, J. See Drevon, B.

Hagsten, O. See Johansson, C. H.

Hague, S. M., Wilbur, J. W., and Hilton,

J. H., factor in soya beans affecting vitamin-A value of butter, B., 490.

Hahn, A., and Kretsehmann, A., colorimetric determination of $p_{\rm H}$, A., I, 96. Niemer, H., and Fisehbach, I., determination of pyruvic acid in muscle, A., III,

Niemer, H., and Heiting, H., inhibition of lactic acid formation in the cell by

oxygen, A., III, 62. and Ottawa, H., influence of bromo-

acetate, sodium fluoride, and sodium oxalate on glycolysis in muscle, A., III, 177. Ottawa, H., and Mehler, E., preparation

of phosphoglyceric and glycerophosphoric acids by decomposition of hexosc diphosphate by yeast, A., III, 70. Hahn, E., determination of isopropyl

alcohol in respiratory air, A., III, 411. Hahn, F., anti-complementary action of

matured extracts of organs, A., III, 166.

Hahn, G., and Kley, W., isomerism of norcoralydine, A., II, 265.

and Leditschke, L., bec poison. II.

Magnesium content. III. Division
into two components. IV. Isolation of both components of the poison by dialysis, A., III, 57, 200, 341.

and Ostermayer, H., bee poison. I., A.,

and Stiehl, K., β -hydroxyphenylethylamines and their transformations. IV. Synthesis of tetrahydroisoquinolinecarboxylic acids and spontaneous decarboxylation of a-keto-acids under physiological conditions, A., II, 76.

Hahn, H., Juza, R., and Langheim, R., colorimetry with colloidal solutions. II. Colorimetric determination of copper

as ferrocyanide, A., I, 632.

Hahn, L. A., Hevesy, G. C., and Lundsgaard, E. C., circulation of phosphorus in the body revealed by application of radioactive phosphorus as indicator, A., III, 471.

Hahn, O., artificial radio-elements produced by neutron bombardment; elements

beyond uranium, A., I, 5. Meitner, L., and Strassmann, F., elements

beyond uranium and their chemical behaviour, A., I, 423.

Strassmann, F., and Walling, E., production of weighable quantities of the strontium isotope 87 as transformation product of rubidium from a Canadian mica, A., I, 210.

See also Aston, F. W., and Meitner, L.

Hahn, W., improvement of metallic surfaces for milk and food manufacture by use of aluminium and its alloys, B., 387.

Halmer, C., Voigt, C. Q., and Finn, A. N., gases in some optical and other glasses, B., 1048.

Haig, C. See Hecht, S.

Haigh, B. P., wire-rope problems, B., 351. Haighton, C. A. A., underlayers for plaster of Paris [surgical] dressings, (P.), B., 621.

Hain, A. M., effect of litter size on growth and of estrone administered during lactation (of rat), A., III, 491.

Haines, C. L., starting potentials of Geiger-Müller counters, A., I, 50.

See also Locher, G. L.

Haines, R. B., effect of pure ozone on bacteria, A., III, 72. Freezing and death of bacteria, A., III, 72. teriology of the hen's egg, A., III, 434.

Lea, C. H., Lea, D. E., and Tomkins, R. G., use of ultra-violet light in preservation of food-stuffs, B., 1264.

See also Lea, D. E. Haines, R. T. M., colloids and biological effect of radiation, A., I, 132.

Haines, S. F., use of iodine in recurrent exophthalmic goitre, A., III, 13.

Haines, W. B., and Guest, E., manuring of Hevea, B., 602.

Haissinsky, M., behaviour of polonium in presence of sulphur dioxide, A., I, 321. Electrolysis of salts of barium and radium in acetone, A., I, 419.

and Emmanuel-Zavizziano, (Mme.) H., preparation of thin layers of titanium by an electrolytic method, A., I, 253.

Haitinger, M., fluorescence microscopy, A., I, 634.

Hake, D. S. Sec Kinzie, C. J. Haken, H. L. See Scholder, R.

Haken, K. von. See Goerig & Co. A.-G. Hal, I. van der, determination of the alkali reserve of the blood with the Mook micro-apparatus, A., III, 114.

Halapine, I. K., analysis of dysentery toxin by means of the flocculation reaction, A., III, 250.

Basilevskaia, L., and Schitkova, N., titration by flocculation of antidysenteric sera, A., III, 116.

Halbach, K., road coverings, (P.), B., 350. Halban, H. von, and Szigeti, B., ionic association and absorption spectra, A.,

Halban, H. von, jun., obtaining polarised neutron beams, A., I, 544.

and Preiswerk, P., slow neutrons, A., I, 276.

See also Frisch, O. R.

Halberstädter, L., and Doljanski, L., action of radium rays on growth of cells in vitro, A., III, 262.

Halbsgut, A., influence of extract of squill and scillaren on the bundle of His and the refractory phase of frog heart, A., III, 426.

Halcrow, W. T., and Lea, F. M., special cement, B., 785.
Hald, J. See Larsen, V.
Hald, P. M., and Eisenman, A. J., distri-

bution of bases between cells and scrum of normal human blood, A., III, 165.

See also Eisenman, A.J.

Halden, W., fat-soluble vitamins. I. Nature and importance of vitamins, A., III, 187. "Improvement" [refining] of fats, B., 1232.

Halden, W., and Unger, G. K., determination of carotene in small amounts of blood, A., III, 195.

See also Bilger, F.

Halden & Co., Ltd., J., and Holden, J., impregnated or treated cloths, etc., (P.), B., 338. Cleansing preparations, (P.), B., 367.

Halder, M. N. See Chatterjee, H. N.

Haldi, J., and Bachmann, G. [with Wynn, W., and Little, J. M.], effect of exercise on metabolism following ingestion of water, glucose, and fructose as shown by the course of the respiratory quotient, A., III, 464.

See also Bachmann, G.

Hale, A. H. See Baxter, G. P.

Hale, F., relation of vitamin-A to anophthalmos in pigs, A., III, 404.

Hale, F. E., iron removal [from water] without aëration—precipitation of ferrous carbonate in a closed system, B.,

See also Shapiro, R.

Hale, G. C., and Cameron, D. R., propellent powder, (P.), B., 91. [Nitrocellulose] propellent powder, (P.), B., 503.

Hale, J. B. See Bailey, C. R. Hale, M. W. See Rees, C. W. Hale, R. M. See Mayer, L. L.

Hale, R. W. See Friend, J. N.

Hale, W. J., Christensen, L. M., and Chem. Foundation, dehydration of alcohol, (P.), B., 416.

See also Dow Chem. Co.

Hale, W. S. See Balls, A. K. Hales, G. J. See Gen. Electric Co.

Haley, F. L., and Samuelsen, G. S., cystine metabolism. II. Detoxication of bromobenzene, A., III, 304.

Halferdahl, A. C. See Cook, W. H.

Halford, R. S., and Hornel, J. C., rearrangement of N-chloroacetanilide, A., II, 491.

See also Olson, A. R.

Hall, A. J., unshrinkable wool in knitted goods, B., 890.

Hicking, W. N., and Pentecost, S. J., rendering wool materials unshrinkable, (P.), B., 1041.

Hall, A. J. C., micro-determination of sulphides, A., I, 97.
Hall, C. B. See Du Pont de Nemours &

Co., E. I.

Hall, C. C., stainless steel, B., 1351.

and Cawley, C. M., composition of the products obtained by the hydrogenation-cracking of low-temperature tar, B., 1296.

Hall, F. G., Dill, D. B., and Barron, E. S. G., comparative physiology in high altitudes, A., III, 247.

See also McCutcheon, F. H. Hall, G. A., aspects of modern [wood] pulp manufacture, B., 424.

Hall, G. E., and Ettinger, G. H., effect of regular injections of acetylcholine on the choline-esterase activity of serum, A., III, 135.

and Lucas, C. C., choline-esterase activity of normal and pathological sera, A., III, 139. The acetylcholinecholine-esterase system, A., III, 429.

See also Ettinger, G. H.

Hall, G. F., and Powell, A. D., solubility and diaminoacridine content of acriflavine, B., 87.

Hall, G. L., recent taste and odour tests of paints for water tanks, B., 1371.

Hall, G. O., and Schwartz, C., sanitary value of sodium metaphosphate in dishwashing, B., 540.

Hall, Harvey, theory of photo-electric absorption for X-rays and y-rays, A., I, 208.

Hall, Helen. Sec Bills, C. E.

Hall, H. C., structure and characteristics of aluminium alloys, B., 926. [Aluminium] alloys for bearings, (P.), B., 53. Aluminium alloys, (P.), B., 1361.

Hall, H. F., second report of the Steel Castings Research Committee. IV. Strength and ductility of east steel during cooling from the liquid state in sand moulds,

B., 45.
Hall, H., and James, L. H., bacterial purity of refined sugar [presence of "yeast-growth stimulants"], B., 380.

Hall, J. A., slash pine oleoresin, B., 943. Hall, J. H., continuous heat-treating fur-

nace [for steel], B., 1351.

Hall, J. L. See McCampbell, C. W.

Hall, J. R., certified colours for foods, B., 724.

Hall, K. See Korenchevsky, V. Hall, L. A. See Griffith, C. L.

Hall, N. F. Sec Jones, T. O.

Hall, R. E., and Hall Labs., washing and cleansing [compositions], (P.), B., 465.
Hall, R. O., fibro structure in relation to

fur dyeing, B., 1195. Hall, R. T. See Yoe, J. H. Hall, S. See Hall & Kay, Ltd.

Hall, T. D., and Meredith, D., intensive grazing on the veld. IV. Effect of rotational grazing and fertilising over a sixyear period, B., 1254.

Hall, V. E., and Chamberlin, P. E., synergic ealorigenic actions of adrenaline and dinitrophenol, A., III, 215.

Hall, W. A., ferments, (P.), B., 177. Hall, W. E. See Howlett, G. W.

Hall Laboratories, Inc. See Hall, R. E. Hall, Ltd., J. & E., and Green, E. S., storage of fruit, vegetables, etc., (P.), B., 727.

Hall & Kay, Ltd., Kay, H., Hall, S., and Myers, A., apparatus for conditioning

or drying paper, (P.), B., 431. Kay, P., and Hall, S., apparatus for humidifying air and other gases, (P.), B., 512.

Halla, F., limits of stability of intermetallic

phases, A., I, 509.

and Nowotny, H., X-ray investigation of system manganese-antimony, A., I, 73. See also Abel, E., and Nowotny, H.

Haller, H. L., and LaForge, F. B., crystalline compound of semicarbazide and semicarbazide hydrochloride, A., II, Constituents of pyrethrum flowers. VII. Behaviour of the pyrethrins on hydrogenation. IX. Optical rotation of pyrethrolone and partial synthesis of pyrethrins, A., II, 462, 511.

LaForge, F. B., and Wallace, H. A., purification of pyrethrin concentrates, (P.), B., 716.

See also Claborn, H. V., LaForge, F. B.,

Nelson, O. A., and Rose, W. G. Haller, J. W. E. Sco Wren, H.

Haller, M. H., Beaumont, J. H., Murray, C. W., and Cassil, C. C., lead residues and their removal as influenced by spray programme, B., 182. See also Beaumont, J. H.

Haller, R., existence of transverse element in native vegetable spun threads, B. 423. Wool [structure], B., 890. Haller, R., and Frankfurt, B., influence of tervalent metal salts on solutions of gum arabic, A., I, 461. Haller, R. T. See Wait, B. H.

Haller, W., osmotic pressure of colloidal

solutions, A., I, 238.

Halley, L. F. See Garvey, B. S., jun.

Halliday, E. C. See Jeppe, C. W. B.

Halliday, G. E., changes in phosphatide content of crude soya-bean oil during storage, B., 807.

Halliday, N., and Evans, H. M., fractionation of the vitamin- B_2 complex from various sources, A., III, 188. Dietary production of the syndrome of deficiency in vitamin- B_6 , A., III, 495. New essential dietary factor in mammalian liver, A., III, 497.

Halliwell, G. P. See Westinghouse Electric & Manuf. Co.

Hallman, L. F. See Deuel, H. J., ju Hallock, H. C. See Hawley, I. M. See Deuel, H. J., jun.

Halls, E. E., cutting media, B., 12. Enamelling of light-alloy components of the magnesium base type, B., 51. Impregnation [of paper] and associated processes, B., 126. Paint nomenclature, B., 260. Analytical control of chromium-plating solutions, B., 356. Permeability of impregnated papers, B., 1322.

Hallström, P., determination of moisture in sand by the areometer test, B.,

544.

Hallsworth, S., modern tendencies in vitreous enamelling, B., 240.

Halm, (Mlle.) L. See Cournot, J. Halnan, E. T., digestibility trials with poultry. VII. Digestibility of wheat offals: apparent discrepancy between digestibility coefficients and nutritive values of these products. VIII. Digestibility of dried molassed sugarbeet pulp, B., 284. Sce also Miles, A. A.

Halowax Corporation. See Delaney, M. E., and Hanson, E. R.

Halpern, G. D., reaction between inorganic complex compounds and hydrocarbons, A., II, 372. Elimination of unsaturated hydrocarbons from "pyrobenzine," for determination of benzene and toluene, B., 1156.

See also Terentiev, A. P., and Zelinski, N. D.

Halpern, J., Estermann, I., Simpson, O. C., and Stern, O., scattering of slow neutrons by liquid ortho- and parahydrogen, A., I. 489. and Simpson, O. C., β -ray counter, A.,

I, 379. Halpern, M. Sec Texas Co.

Halpern, O., and Johnson, M. H., jun., neutron scattering by magnetic substances, A., I, 438. Magnetic scattering of slow neutrons, A., I, 489.

Halphen, G., blending of wines, B., 830. Halpin, J. G. See Herrick, C. A.

Halsted, J. A., gonadotropic hormone (prolan) in relation to carcinoma of the cervix, A., III, 256.

Halter, K., evaluation and mode of action

of tetanus toxin, A., III, 414. Halton, P., and Blair, G. W. S., physical properties of flour doughs in relation to their bread-making qualities, B., 609. and Fisher, E. A., storage of wheaten

flour. II. Absorption of oxygen by flour when stored under various conditions, B., 832.

See also Fisher, E. A.

Halverson, J. O., and Dearystyne, R. S., menhaden fish oil as a source of vitamin-

D for growing chicks, B., 494.

Halvorson, H. A., and Lachat, L. L., determination of vitamin-D. V. Xray diagnosis and ash determination of bone calcification, and blood mineral analyses in White Leghorn chicks, A., III, 79.

See also Lachat, L. L.

Halvorson, H. O., Savage, G. M., and Piret, E. L., operation of trickle filters [for effluents], B., 193.

Ham, W. R., diffusion of hydrogen through nickel and iron, A., I, 560. Measurement of transition points of electrolytic iron by hydrogen diffusion, A., I, 565.

Hamada, T. See Kotake, Y. Hamaker, H. C., general theory of lyo-phobic colloids. I. and II., A., I, 78,

182. Colloid phenomena, A., I, 409.

Hamanaka, N., diabetes mellitus. I.

Toxicity of ketones. II. Toxicity of hyperglycamia, A., III, 13. Hamann, C. H. See Williams, R. D.

Hamano, S., crystalline esters of vitamin-

A, A., 111, 324. Hamblen, E. C. See Pratt, J. P. Hamblet, C. H. See Moureu, H.

Hambleton, B. F., Lackey, R. W., and Van Duzen, R. E., explosive gases formed during electrotransurethral resections, A., III, 21.

Hamblin, F. T., apparatus for production of radioactive elements by means of radium, A., I, 635.

and Johnson, Christopher H., Geiger-Müller counters for radiochemical investigations, A., I, 635.

See also Todd, H.

Hambly, J. A., and Consolidated Paper Corp., treatment of [waste] black liquors [from pulp, etc. treatment], (P.), B., 430.

Hamburg, M., and Pickholz, S., malt diastases. III. Attenuation of beer wort in presence of malt diastase, B., 176.

Hamel Akt.-Ges., C., staple fibre, (P.), B.,

Hamence, J. H., scheme for separation and determination of metallic impurities in food-stuffs, B., 389.

Hamer, (Miss) F. M. See Fisher, (Miss) N. I., and Kodak, Ltd.

Hamer, P., recent advances in water softening and boiler feed-water conditioning, B., 853.

Hamer, W. J., halide reference half-cells in p_H determinations, A., I, 581.

and Acree, S. F., effects of corrections for liquid-junction potentials of saturated calomel electrodes on dissociation constants obtained by electro-

metric titration, A., I, 83.

Hamid, M. A., Bhatia, V. S., and Dunnicliff, H. B., action of hydrogen sulphide on mercurous chromate, A., I, 257.

Hamid, S. A. See Desai, R. D. Hamill, W. H., manometer for carbon and hydrogen pressure regulation, A., II, 358. Micro-analysis for exchangeable hydrogen, A., II, 359. Equilibria in protium oxide-deuterium oxide mixtures, A., I, 516.

and Alicino, J. A., storage of carbon dioxide from "dry ice" for Dumas determinations, A., I, 429.

See also Stekol, J. A. Hamilton, A. M. See Eggleton, M. G.

Hamilton, B., and Highman, W. J., jun., test for abnormally large amounts of parathyroid hormone in blood, A., Îll, 403.

See also Highman, W. J., jun. Hamilton, C. C., insecticide, (P.), B., 274. and Endowment Foundation, insecticide

composition, (P.), B., 716.

Hamilton, C. S. See Binkley, S. E.
Omer, (Miss) R. E., and Skiles, B. F.

Hamilton, F. See Imperial Chem. Industries.

Hamilton, F. IV. See Sproule, IV. H. Hamilton, J. B. See Wolfe, J. M.

Hamilton, J. G., absorption of radiosodium in normal human subjects, A., III, 423.

and Stone, R. S., excretion of radio-sodium following intravenous ad-ministration in man, A., III, 175.

Hamilton, J. M., control of cedar-apple rust in the Hudson valley, B., 713. Hamilton, J. W. See Mahin, W. E.

Hamilton, L. A., and Olcott, H. S., antioxidants and autoxidation of fats. VIII. Autoxidation of oldic acid, methyl oleate, and oleyl alcohol, B., 364.

Hamilton, P. D. P., milling methods of the Porcupine district of northern Ontario, B., 48.

Hamilton, R., and Celastic Corp., stiffening material [for fabrics, leather, etc.], (P.), B., 32.

Hamilton, S. W. See Lee, C. E. Hamilton, T. S. See Mitchell, H. H. Hamilton, W. S. See Parkes, J. W.

Hamilton-Adams, T., [aluminium-cobalt or nickel-iron] alloy for permanent magnets, (P.), B., 249.

Hamilton Laboratories, Inc. See Rentschler, M.J.

Hamlin, H. F. See Spedding, F. H. Hammarsten, E. See Agren, G.

Hammarsten, G., determination of calcium in urine and fæces by Aron's method, A.,

Hammell, R. H., and Houdry Process Corp., reaction apparatus and its assembly, (P.), B., 1144.

Hammer, B. W., action of aldehydes on certain cultures of Streptococcus liquefaciens in milk, A., III, 36. Germicidal property of milk, B., 1399.

See also Lane, C. B., and Michaelian, M. B.

Hammer, H. G., medium for disinfection, wound treatment, etc., (P.), B., 981.

Hammer, K. See Gerlach, IV. Hammerschmidt, E. G., gas hydrates, B.,

Hammerschmidt, W. See Büngner, W. Hammerstein, H. von. See Hess, K.

Hammes, H. See Jenckel, E. Hammett, L. P., effect of structure on reactions of organic compounds; benz-

ene derivatives, A., I, 142. See also Beans, H. T., Betts, R. L., Paul, M. A., Roberts, Irving, Rosenthal, R., and Treffers, H. P.

Hammick, D. L., and Langrish, (Miss) D.determination of cyclopentadiene and indene and their polymerisation in carbon tetrachloride solution, A., II,

and Lister, M. IV., photochemistry of some aliphatic nitroso-compounds, A., I, 255.

See also Dyson, P.

Hammond, J., news[-print] penetration tester, B., 126.

Hammond, J. W. See MacIntire, W. H. Hammer, K. C., effects of nitrogen supply on rates of photosynthesis and respiration in plants, A., III, 48.

Hamner, \bar{P} . A., and Liubtschenko, L. D., determination of vanadium in Kertsch

ladle slags, B., 1066. Hamon, M. See Rose, M.

Hámos, L. von, X-ray microscope, A., I, 479.

Hampe, R. See Schreder, K. Hampel, A. See Grosse-Brockhoff, F.

Hampel, C. W. See Kerr, S. E. Hampson, G. C., and Weissberger, A., dipole moment and structure of organic compounds. XVI. Electric

moments of chlorinated diphenyls, A., I, 12. See also Birtles, R. H., Burawoy, A.,

and Gregg, A. H. Hampton, A. C., and Gasoline Products Co., treatment of hydrocarbon oils, (P.), B.,

Hampton, B. L., and Pollard, C. B., synthesis of morpholine, A., II, 36.

Hampton, W. H. See Standard Oil Co. of California.

Hampton, W. M., thermal endurance of glass, B., 136.

See also Gould, C. E.

Hampton Co., dyeing rayon in cake form, (P.), B., 1198.

Han, F. See Buzágh, A. von. Han, J. E. S., carbonate content of oil lye clarified by centrifugation and long settling, B., 464.

Han, K., Raman effect of organic substances. VII. Raman effect of furan derivatives, A., I, 63.

See also Matsuno, K.

Han, W. P. See Sah, P. P. T. Hanahan, M. L. See Du Pont de Nemours & Co., E. I.

Hanak, J., fine distribution of gases in liquids, particularly for fermentation purposes, (P.), B., 6.

Hanak, M. See Karczag, L.

Hance, F. E., rapid agricultural analysis
using "kit" methods: soil reaction (pH); determination of readily-soluble phosphate in soil, B., 163, 270. [Report on] chemistry, B., 478.

Hancock, A., Crnndall, S. F. W., and Spence & Sons, Ltd., P., [titanium] colour

lakes, (P.), B., 701.

Hancock, H. E., paint and varnish chemistry since the world war, B., 589.

Hancock, W. T., oil-cracking still, (P.), B., 18. Petroleum refining system, (P.), B., 323, 521. Tube still, (P.), B., 521.

Oil-cracking system, (P.), B., 521. Hancox, E. G. See Langford, G. B. Hand, P. G. T. See Cooper, C. A. Handel, J. van den. See Becquerel, J.

Handforth, S. L. See Du Pont de Nemours & Co., E. I.

Handovsky, H., and Farber, S., influence of p_H on diffusion of acetylcholine, A., III, 21.

and Samaan, A., renal circulation and secretion of the dog, with special reference to the effect of pituitary (posterior lobe) extract, A., III, 360.

See also Bayless, F. Handrek, H. See Porzellanfabr. Kahla. Handy & Harman. See Leach, R. H. Hanegraaff, C. See Delépine, M.

Hanel, R., heat treatment of wear-resisting grey cast iron, B., 679.

Hanel, R., strength of nickel alloys at low temperatures, B., 795. Toughness (tenacity) at low temperatures of materials containing nickel, B., 923.

Hanemann, H., Hanffstengel, K. von, and Hofmann, W., resistance to creep of antimonial lead, B., 1353.

and Hofmann, W., solid-solution formation and grain refinement in magnesium alloys, B., 1356.

See also Bluth, M., Hanffstengel, K. von, Hofmann, W., and Schrader, A.

Hanemann, W., structure of aluminium

alloys, B., 450.

Hanes, C. S., action of amylases in relation to structure of starch and its metabolism in the plant. I. Chemical constitution of starch, II. Starch degradation by amylases. III. Amylase system of barley and malt, A., III, 500.

and Kidd, F., hydrolysis of sucrose by malic acid-malate mixtures, A., Ill, 442,

See also Kidd, F.

Haney, F., and Tunnington, F., growing chicory (for drying), B., 599.

Hanffstengel, K. von, and Hanemann, H., mechanism of creep and fatigue investigated with lead and lead alloys, B., 572.

See also Hanemann, H.

Hanford, Z. M. See Supplee, G. C.

Hanisch, G. See Butenandt, A. Hanke, M. E. See Donovan, P. B., and

Kendrick, A. B.

Hankins, J. M. See Jarrell, T. D.Hankinson, C. L. See Richardson, G. A. Hanks, J. H., and Weintraub, R. L. ionic exchange in relation to p_{H} and rigidity of silicic acid jellies, A., I, 461. Preparation and properties of silicic acid jellies for pure culture isolation of bacteria, A., III, 359.

Hanley, A. J., Respess, R. B., and Respro, Inc., material for use as leather sub-

stitute, (P.), B., 335.

Hanley, F., uncommon feeding-stuffs, B., 184.

See also Weston, W. A. R. D.

Hanlon-Buchanan, Inc. See Sweeney,

Hanmer, H. R. See Bradford, J. A. Hann, R. M., and Hudson, C. S., d- β -galaheptose and its derivatives, A., II, 178. Calcium chloride compound of a-dgalactose, A., II, 484. Aldehydo-derivatives of d-a-galaheptose, A., II, 485.

See also Montgomery, (Miss) E. M.Hanna, E. L., and Davol Rubber Co.,

rubber articles, (P.), B., 1379.

Hanna, G. D., illuminator for opaque objects, A., I, 379.

Hanna, M. I. See Campbell, W. R. Hanna, W. C. See Dahl, L. A.

Hannagen, R. W., zinc sulphide as opacifier for enamels, glasses, etc., (P.), B.,

Hannay, R. J. See Ridgway, W.

Hanne, R., comparison of the efficacy of disinfectants, B., 846. Formaldehyde vacuum-disinfection process, B., 1281.

Hannebohn, O., and Klemm, W., measurements on gallium and indium compounds. XI. Fluorides of gallium, indium, and thallium, A., I, 93. Hannemann, O., "sinterite" jointing for

socketed water-pipes, B., 1414.

Hanning, F., comparison of biological and chemical methods for determination of vitamin-C in canned, strained vegetables, A., III, 233. Contents of vitamin-A and -B in canned, strained vegetables, B., 724.

Hannum, J. A. Sec Flood, E. D.

Hanovia Chemical & Manufacturing Co., and Anderson, W. T., air-conditioning apparatus, (P.), B., 996.

See also Robinson, F. W.

Hansa-Gas-Generatoren Ges.m.b.H., and Hansa-Generatoren Ges.m.b.H., washers for generator gases, etc., (P.), B., 1290.

Hansa-Generatoren Ges.m.b.H. See Hansa-Gas-Generatoren Ges.m.b.H.

Hansa-Mühle Akt.-Ges., phytosterin produets, (P.), B., 188.

Hansawerke Lürman, Schütte & Co., washing of animal fibres, (P.), B., 27.

Hanseatische Mühlenwerke Akt.-Ges. See Neiss, O., and Schweiger, A.

Hansella Ges.m.b.H., vacuum concentrating vessels, (P.), B., 307.

Hansen, A., and Lund, A., pH measure-

ments in fermenting beer wort, B., 176. Hansen, A. E., influence of viosterol and

parathyroid extract on mineral metabolism in osteogenesis imperfecta, A., III, 15. Making vinegar by the Frings process, B., 177.

and Brown, William R., effect of lowfat diets on serum-lipins of rats, A., III, 468.

See also Brown, William R.

Hansen, C. J. See Koppers Co. of Dela-

Hansen, D. A., treatment of whale meat, (P.), B., 186.

Hansen, D. W., and Prolamine Products, Inc., prolamine-base flexible sheet material, (P.), B., 1325.

Hansen, E., chemical changes of fruits

ripened in presence of ethylene, A., III,

Hansen, E. H., and Andrews & Goodrich, Inc., treatment of fibrous, granular, or other materials in loose form, (P.), B., 632. Hansen, E. K., and Brace, P. H., furnaces

and atmospheres for annealing copper with electric heat, B., 1219. Hansen, H. C. See Shaw, A. O., and

Theophilus, D. R.

Hansen, H. Lausten, stability of tropacocaine solutions towards heat-sterilisation and storage in ampoules, B., 841.

Hansen, Harold L., chloro- and fluoro-compounds related to adrenalone, A., II,

and Fosdick, L.S., p_H of dentifrices under varying conditions, B., 191.

Hansen, L. A. Sec Stamm, A. J. Hansen, M. E., and Amer. Anode Co., dyed rubber products [from latex], (P.), B., 474.

Beal, C. L., and Amer. Anode Co., coloured rubber goods, (P.), B., 266.

Hansen, O. A. See Linde Air Products Co. Hansgirg, F., water enriched with heavy water, (P.), B., 668.

and Amer. Magnesium Metals Corp., apparatus for producing substantially pure magnesium, (P.), B., 692. Mctallic magnesium, (P.), B., 934.

Hanske, W. See Steinkopf, W. Hansley, V. L. See Du Pont de Nemours & Co., E. I., and Scott, N. D.

Hanslitschek, A., determination of free lime in Portland cement, B., 552.

Hanson, A. M. See Rowntree, L. G. Hanson, D., and Pell-Walpole, W. T., constitution of tin-rich antimony-cadmium-tin alloys, A., I, 609. Mechanical properties of tin-rich antimony-cadmium-tin alloys, B., 1354.

See also Alexander, W. O., Brit. Non-Ferrous Metals Res. Assoc., and Campbell, (Sir) John.

Hanson, E. A., physical properties of chlorophyll films, A., I, 301. See also Ketelaar, J. A. A.

Hanson, E. E., kinetic energies of atomic ions formed by electron impact in nitric oxide and hydrogen chloride, A., I, 106. Dissociation of NO and HCl by electron impact, A., I, 159.

See also Nier, $A.\ O.$

Hanson, E. R., and Halowax Corp., fireresistant composition [in textiles, etc.], (P.), B., 234.

Hanson, G. B., Eddy, H. C., and Petroleum Rectifying Co. of California, multipleelectrode treater and method [for oil emulsions], (P.), B., 19.

Hanson, H. See Abderhalden, E. Hanson, M. G., alkali metals [lithium], (P.), B., 457. Hanson, W. T., jun. See Evans, R. M.

Hanstock, R. F., opacity of paints, B., 260. Measurement of gloss, B., 400.

Hanström, B., sinus glands and hormonally controlled pigment metabolism of Crustacea, A., III, 230.

Hantke, reactions between potassium chlorate and ammonium salts, A., I, 420_{-}

Hantke, G. See Swientoslawski, W.

Hanus, F. See Zinke, A.

Hanut, C. J., mode of action of Bothrops atrox venom on blood coagulation in vitro, A., III, 338.

Hanzal, R. F. See Muntwyler, E. Hanzawa, J., and Yoshimura, Sadahiko, isolation and cultural characters of Clostridium dissolvens, A., III, 225.

Hanzlik, P. J., Barnett, C. W., and Richardson, A. P., modified composition of iodobismutol; results on local irritation, A., III, 177. See also Lehman, A. J.

Hao, L., vital dyes in [tissues of] the silkworm, A., III, 134.

Hapke, A. G., colour reproduction process,

(P.), B., 983.

Happel, P. Sec Rosenberg, E.

Happeld, F. C., and Key, A., bacterial purification of gasworks liquors. II. Biological oxidation of ammonium thioeyanate, B., 1140.

Haq, M. I., and Samuel, R., absorption spectrum of phosphorus pentaselenido

vapour, A., I, 442. Hara, M., existence-range of the β Hume-Rothery phases, A., I, 128. Hara, R. See Sakurazawa, K.

Harada, M., weathering of igneous rocks. IV. Photochemical method of determining free iron oxide, A., I, 538. Harada, T., microscopy of magnesium

carbonate crystals, B., 1334. Harada, Takeshi. See Takayama, Y.

Harada, Y. See Ishibashi, M.

Haraldsen, H., magneto-chemical investigations. XXIV. Thermomagnetic study of transformations in the troilitepyrrhotine field of the iron-sulphur system, A., I, 242.

Haraszti, J., thioborneol and isothioborneol; mercaptides of thioborneol, A., II, 508.

Harbord, F. W., Thomas-Gilchrist basic process, 1879—1937, B., 1058.

Harcourt, G. A., distinction between enargite and famatinite (luzonite), A., I, 430.

Hardacre, R. W. See Imperial Chem. Industries.

Hardeastle, F. B., and Wakeford, L. T., coagulating tanks used in production of

rubber, (P.), B., 1380.

Harden, W. C. See Rice, R. V.

Hardenbergh, W. A., chemical sewage treatment at Liberty, N.Y., B., 506.

Hardenburg, E. V., cultural and storage research with potatoes, B., 599.

Harder, A. See Zintl, E. Harder, J. See Vielly, J.

Hardgrove, R. M., direct firing of rotary [cement] kilns, B., 674.

See also Bailey, E. G. Hardiek, W., and Davison Chem. Corp., purification of sulphuric acid [containing titanium or zirconium], (P.), B., 666.

Hardigg, W. B., explosive charge container, (P.), B., 1280.

Hardikar, calcium in therapeutics, A., III,

Hardin, L. J. Sec MacIntire, W. H.

Harding, C. K., light-weight concrete and ceramic aggregate therefor, (P.), B., 1210.

Harding, H. E., effects on the rabbit of repeated large intravenous doses of glucose, A., III, 215.

Harding, J. See Ditchburn, R. W.

Harding, J. W., dynamical theory of electron diffraction and its application to surface problems, A., I, 172.

Harding, K. See Somer, A. J. Harding, W. H., Montgomery, A. W., and Amer. Cyanamid & Chem. Corp., rosin sizing, (P.), B., 64.

Hardinge, H., Russell, R. J., and Hardinge Co., classifier, (P.), B., 740.

Hardinge Co., Inc., classifiers, (P.), B., 632. See also Hardinge, H.

Hardman, A. E., steaming [of coke] in horizontal retorts, B., 638.

Hardman, A. F., and Kelly-Springfield Tire Co., accelerators of vulcanisation, (P.),

Hardon, H. J., Padang soil, a typical example of podsol in the tropical lowlands, B., 953.

Hardt, F. See Lettré, H.

Hardt, G., and Amer. Bemberg Corp., [soft-lustre] artificial silk, (P.), B., 536. Hardtmann, M., and Franz, Ehrhart,

cleansing composition for [living] mucous membranes, (P.), B., 188.

Hardy, A. C., physical basis of colour measurement, A., I, 534.

Hardy, C., and Hardy Metallurg. Co., powder metallurgy, (P.), B., 581. Alloys [chromium and manganese steels], (P.), B., 690. Electrical conductors, (P.), B., 1075.

See also Hardy, Inc., C., and Hardy Metallurg. Co.

Hardy, C. W., automatic lacquering, enamelling, and japanning, B., 261. Application of lacquer by tumbling, B., 590. Imitation gold finishes, B., 686.

Hardy, E. C., and Morton Salt Co., filter, (P.), B., 1147.

Hardy, F., effect of liming on phosphate status of soil, B., 477. [Sugar] cane ecology, B., 479.

Hardy, G. See Jenkins, R. L. Hardy, H. A., agglomerates from carbonaceous material without addition of a binder, (P.), B., 317.

Hardy, J. D., response of the skin to radiation, A., III, 423.

and Muschenheim, C., radiation of heat from the human body. V. Transmission of infra-red radiation through skin, A., III, 388.

Hardy, J. I. See Bell, D. S., and Hays, M. B.Hardy, R. D. See Brit. Coal Distillation. Hardy, W. H. See Boughton, I. B.

Hardy, Inc., C., and Hardy, C., refining or

alloying of metals, (P.), B., 692.

Hardy Metallurgical Co., and Hardy, C., composite metal articles, (P.), B., 932. See also Hardy, C.

Hare, D., and Kersten, H., effect of ultra-violet light on indolyl-3-propionic acid, A., III, 501.

Hare, W., drying and conditioning of textile articles and fabrics, (P.), B., 333.

Hare, W. A., Peterson, L., and Soler, G., determining gas content of molten steel, B., 1351.

and Soler, G., studying inclusions in alloy steels, B., 1351.

Harford, A. D., and Hill, D. W., reactions of o-hydroxybenzylideneacetophenones. VII. Flavylium salts from dihydro-

chalkones, A., II, 206. Harford, C. G., and Little, Inc., A. D., chlorohydrin esters, (P.), B., 1171.

Harford, E. F., and Du Pont Viscoloid Co., diaphragm for electrical reproduction of sound, (P.), B., 1239.

Harger, D. K. See Standard Oil Co. of California.

Harger, R. N., Hulpieu, H. R., and Lamb, E. B., speed with which various parts of the body reach equilibrium in the storage of ethyl alcohol, A., III, 475.

Hargraves, W. B. See Walker, A. O. Hargreaves, G. W., quinone formation in the thalleioquinine reaction; preparation of quinolyl-o-quinone, A., II, 75.

Hargrove, G. C., and Gasoline Products Co., [hydrocarbon oil] cracking system, (P.), B., 323.

Haring, H. E. See Bell Telephone Labs. Haring, M. M., and Kaveler, H. H., promoter action; oxidation of aniline sulphate by hot concentrated sulphuric acid in presence of copper and mercury sulphates, A., II, 95. Haringhnizen, P. J., and Was, D. A., thin

layers of tin and other metals. III. Interaction between metals and lubricating oils, B., 408.

Was, D. A., and Kruithof, A. M., optical properties and structure of thin gold films, A., I, 503.

See also Ornstein, L. S.

Harington, C. R., endocrines in theory and practice; chemistry of the thyroid gland, A., III, 75.

See also Clutton, R. F.

Harker, D. See Donnay, J. D. H. Harker, G., factors influencing radiosensitivity, A., III, 395.

Harkins, H. H., rubber—a vital industrial material, B., 265.

Harkins, \hat{W} . \hat{D} ., intermediate nucleus and atomic disintegration in steps, A., I, 109, 214. Linear or edge energy and tension as related to energy of surface formation and of vaporisation, A., I, 179. Nuclear exclusion principle and the neutron-proton pattern, A., I, 491.

Harkins, W. D., Kamen, M., Newson, H. W., and Gans, D. M., neutron-proton interaction: scattering of neutrons by protons, A., 1, 58.

and Myers, R. J., p_{II} and behaviour and measurement of unimolecular and multimolecular films on water, A., I, 26. Viscosity of unimolecular films, A., I, 562.

See also Aston, F. W., Brosi, A. R., Fetcher, E. S., jun., Fowkes, F. M., Moon, R. J., and Myers, R. J.

Harkness, A. M. See Gen. Chemical Co. Harkness, E. V. See Venning, E. H. Harkness, H. S., and Peck, S. S., "paint-

ing" raw sugars in the centrifugals, B., 1112.

Harkness, J. B., Kistiakowsky, G. B., and Mears, W. H., gaseous polymerisations, A., I, 569.

Harkort, H., characterisation of firing colour [of ceramics] by determination of white content with a photo-electric reflexion meter, B., 549.

Harlan, W. R. See Bradford, J. A. Harlay, V., derivatives of hydroxyphenylmaleimide, A., II, 62.

Harle, T. F. See Carpenter, L. G. Harlow, E. C. G. See Gen. Electric Co. Harlow, E. S. See Bradford, J. A.

Harlow, E. V. See Shively, W. L.

Harlow, W. F. See Internat. Combustion, Ltd.

Harman, C. G. Seo Parmelee, C. W. Harman, M. W., vulcanisation characteristics of mercaptobenzthiazole derivatives, B., 372.

Harmer, P. M., fertilising muck soil, B., 166.

Harmon, W. A. S., and Peckham, G. C., cracking of hydrocarbons, (P.), B., 1015.

 Harms, H. See Wolf, K. L.
 Harms, H. P., Prohaska, J. van, and
 Dragstedt, L. R., relation of panercatic juice to pancreatic diabetes, A., III, 266. See also Dragstedt, L. R., and Prohaska, J. van.

Harms, J., and Jander, G., preparation of highly disperse aërosols of definite part-... icle size by photochemical decomposition of mercury dimethyl, A., I, 27.

Harmsworth, W. P., precious metals as materials for decorating pottery and

glass, B., 138.

Harned, H. S., relative partial molal heat content of zinc sulphate in aqueous

solution, A., I, 186. and Cook, M. A., thermodynamics of aqueous potassium hydroxide solutions from e.m.f. measurements, A., I, 242. Thermodynamics of aqueous potassium chloride solutions from c.m.f. measurements, A., I, 462. Activity and osmotic coefficients of some hydroxidechloride mixtures in aqueous solution, A., I, 617.

and Crawford, C. C., thermodynamics of aqueous sodium bromide solutions from e.m.f. measurements, A., I, 617.

and Donelson, J. G., thermodynamics of ionised water in lithium bromide solutions, A., I, 462.

and Fitzgerald, M. E., thermodynamics of cadmium chloride in aqueous solution from e.m.f. measurements, A., I, 135.

and Geary, C. G., ionic activity coefficient product and ionisation of water in barium chloride solutions from 0° to 50°, A., I, 617.

Harned, H. S., and Hickey, F. C., hydrolysis of acetate ion in sodium chloride solutions, A., I, 462.

and Morrison, J. O., cell for measurement of thermodynamic properties of hydrochloric acid in dioxan-water mixtures, A., I, 245.

Harner, H. R., Chubb, M. F., and Eagle-Picher Lead Co., storage-battery electrode, (P.), B., 362.

See also Hatfield, J. E.

Harnly, M. H. See Khouvine, Y. Harns, H. G. See Cory, E. N.

Harold, C. H. H., chemical and bacteriological examination of London waters, B., 193.

Harold, J. F. X., textiles go chemical, B., 1038.

Harpen, N. H. van, kinetics of coagulation of latex of Hevea brasiliensis; separation of hydratantic acid, B., 1244.

Harper, D. A., preferential reduction of certain fatty acid groups during hydrogenation of natural fats, B., 1235.

and Hilditch, T. P., component acids and glycerides of partly-hydrogenated marine animal oils. III. North Sea cod-liver oil, B., 1234.

Hilditch, T. P., and Terleski, J. T., component acids and glycerides of partlyhydrogenated marine animal oils. I. General review of analytical procedure employed, B., 1234.

Harper, F. C. See Roger, R.

Harper, H. J., pore space-clay ratio, an important index to the physical character of soil, B., 1248.

and Volk, G. W., microscopical examination of the natural structure and pore space in soils, B., 1248.

Harper, J. P., crystal structure of sodium carbonate monohydrate, Na₂CO₃,H₂O, A., I, 288.

Harper, L. R., and Powell, D. W., ferroprussiate paper and production of prints therefrom, (P.), B., 501.

Harper, W. D., electrical thermostat, (P.), B., 802.

Harrap, E. R. See Turner & Newall, Ltd.

Harrassowitz, H., distribution of potassium in nature, A., I, 585. Light metal raw materials, B., 577. Fate of light metals in the earth, B., 1356.

Harreis, F., and Schneider, H., significance of beer yeast as a source of vitamins, A., III, 230.

Harrel, C. C., viscosity of flour; standardisation of Macmichael viscosimeter, B.,

Harrer, C. J. See Stotz, E.

Harrington, D., and Davenport, S. J., review of literature on effects of breathing dusts with special reference to silicosis, A., III, 419.

Harrington, D. O. See Cordes, F. C. Harrington, E. L., and Penley, H. H., desorptive action of radon, A., I, 179. and Wienshall, G. A., magnitude of the K absorption discontinuity for tin and for silver, A., I, 159.

See also Wienshall, G. A.

Harrington, F. M., influence of fertiliser on potato maturity and type, B., 168. Harrington, G. E., micro-organisms in the Washington, D.C., water supply, B.,

Harrington, J. A. See Moody, A. H. Harrington, L. C. See Franta, W. Harrington, P. See Dundas, W. A.

Harrington, R. H., precipitation-hardening and double-ageing [in metal alloys], B., 569.

See also Gen. Electric Co.

Harrington, S. See Jacques, F. O. Harris, B. R., phosphoric esters of fatty acid monoglycerides, (P.), B., 118. Sulphonated higher unsaturated carboxylic esters of polyhydroxy-compounds, (P.), B., 214. Making cake, (P.), B., 284. Confection, (P.), B., 285. Branched-chain octyl sulphate [wetting and detergent agents], (P.), B., 1020. Phosphoric acid esters [wetting and detergent agents], (P.), B., 1020. [Oil] emulsions, (P.), B., 1236. and Reynolds, M. C., egg product, (P.), B., 84, 978.

See also Epstein, A. K.

Harris, C. R. See Du Pont de Nemours & Co., E. I.

Harris, E. E. See Cohen, W. E. Harris, E. J., analysis of mixtures of methanol and ethanol, B., 1308.

Harris, E. P. Sec Enthoven & Sons, H. J. Harris, G. H., raspberry nutrition. II. Causes of raspberry failures in the coastal area of British Columbia, B., 1253.

Harris, G. M., blast-furnace hearth and bosh, (P.), B., 1070.

Harris, H. C., influence of lime on avail-

ability of potassium [in soil], B., 477.

Harris, I., Jones, E. W., and Aldred, C. N., blood- p_{Π} and -lactic acid in different types of heart disease, A., III, 461.

and Levin, D. A., effects on the human electrocardiogram of introduction of calcium and potassium into the blood, A., III, 337.

Harris, J. C., jun., vapour saturation, (P.), B., 1150.

Harris, J. M., jun. See Standard-I. G. Co. Harris, J. P., and Industrial Chem. Sales Co., rendering [of fats], (P.), B., 367.

and Sigworth, E. A., activated carbonits manufacture and storage, B., 745. Feeding of powdered activated carbon [in water purification], B., 848.

and Welch, W. A., effect of various adsorptive media on rancidity and the Kreis test, B., 941.

Harris, L. E., and Norden Labs., therapeutic preparation [of calcium gluconate], (P.), B., 1134.

Harris, L. J., vitamins in human nutrition; vitamin- B_{ij} and the brown versus white bread problem." I., A., III, 280. Determination of vitamin- B_{ij} by the bradycardia method, A., III, 325. Determination of vitamin-C by titration, A., III, 327. Vitamin- B_2 complex; differentiation of the anti-blacktongue and "P.-P." factors from lactoflavin and vitamin- B_6 . VII. Experiments with monkeys and other species, A., III, 405. and Leong, P.C., vitamin- B_1 content of

various kinds of bread and flour, B.,

Passmore, R., and Pagel, W., vitamin-C and infection; influence of infection on the vitamin-C content of the tissues of animals, A., III, 343.

See also Abbasy, M. A., and Leong, P, C.

Harris, M., Mease, R., and Rutherford, H., reaction of wool with strong solutions of sulphuric acid, B., 538.

Harris, M., and Smith, A. L., oxidation of wool: alkali-solubility test for de-termining the extent of oxidation, B., 123 State of sulphur in oxidised wool, B., 890.

See also Smith, A. L.

Harris, M. M. See Brand, E.

Harris, P. L., and Poland, G. L., organic acids of the ripe banana, A., III, 330.

Harris, R. H., gluten-protein fractionation from sodium salicylate solution. I. Durum wheat gluten fractionation, B., 1397.

and Bailey, C. H., thermal fractions of gluten proteins and their relationship to baking strength, B., 609.

Harris, R. M., Marriott, G. J., and Smith, J. C., effect of alkyl groups on properties of anthraquinone and fluorescein dyes, A., II, 66.

Harris, S. E. See Christiansen, W. G.

Harris, T. II. See Spies, J. R. Harris, T. L., Hirst, E. L., and Wood, C. E., optical rotatory dispersion in the carbohydrate group. VIII. Tetramethyl-8-gluconolactone and tetramethyl-8-galactonolactone, A., I, 348.

Harris, T. N. See Eagle, H. Harris, W. B., solubility of quartz in hydrogen borofluoride, A., I, 611.

Harris, W. R. See Auld, S. J. M.

Harris, W. T. See Turner, L. A. Harrison, C. A., and Anaconda Copper Mining Co., electroplating of metal, (P.), B., 935.

See also Truax, T. R.
Harrison, D. C. See Hawthorne, J. R.
Harrison, D. W., installation factor in automatic controls, B., 96.

Harrison, G. B., colour photography, (P.), B., 1277.

and Spencer, D. A., negative-positive processing of Dufaycolor film, B., 622. Harrison, G. E., thermal diffusion of radon gas mixtures, A., I, 558.

Harrison, G. R., practical possibilities in spectrographic analysis, B., 247.

Harrison, H. E., sodium content of bone and other calcified material, A., III, 415. Harrison, J. See Allen, L. A.

Harrison, J. B., I. Catamorphism of igneous rocks under humid tropical conditions. II. Basic rocks. III. Intermediate rocks, IV. Acidic rocks, A., I, 384.

Harrison, J. G., jun. Seo Oldham, E. W. Harrison, J. M. Sec Burton, D.

Harrison, J. S., and McSwiney, B. A., chemical transmitter of motor impulses to the stomach, A., III, 152.

Harrison, J. W., Prickett, T. B., and Houdry Process Corp., control of catalytic reactions [for hydrocarbon gases], (P.), B., 113.

Harrison, L. E. See IO-Dow Chem. Co. Harrison, P. E., and Du Pont Rayon Co.,

artificial thread, (P.), B., 1192. Harrison, P. K. See Smith, C. E. Harrison, R. See Burden, W. M., and

Genders, R.

Harrison, R. W., Anderson, A. W., and Pottinger, S. R., effect of manufacture on quality of non-oily fish meals, B., 726.

See also Anderson, A. W., Lowen, L., and Pottinger, S. R.

Harrison, T. R. See Mason, M. F.

Harrison, T. W., polarisation of raw sugar, B., 174.

Harrison, W., structure of keratin fibres, B., 765. Keratin fibres, B., 1032.

Harrod, D. C. See Morton, C. Harrold, G. C., Meek, S. F., and Holden, F. R., rapid determination of lead in the

atmosphere, B., 397.

Harrop, G. A. See Thorn, G. W.

Harrow, B., Mazur, A., Borek, E., and Sherwin, C. P., acetylation. II. Effect of various substances on the production of p-aminobenzoic acid in rabbits, A., III, 469.

Mazur, A., Chamelin, I. M., and Lesuk, A., concentration of a hyperglycæmic factor from urine, A., III, 10.

Harrower, P. See Butler, J. A. V.
Harry, R. G., casein and its industrial applications, B., 1124.

Harsch, J. W., and Leeds & Northrup Co.,

heat-treating apparatus [for case-hardening steel], (P.), B., 356. Harshaw, H. M., effect of diet, range, and

fattening on physical and chemical composition of cockerels, A., III, 16.

Harshaw, W. J., and Harshaw Chem. Co.,. chromate-ion reaction; [lead chrom-

ate], (P.), B., 909. Stillwell, W. D., and Harshaw Chem. Co., vitreous enamel opacifier, (P.), B., 551.

Chemical Co. See Harshaw, Harshaw W. J., and Pine, P. R.

Harshberger, N. P., and Bakelite Building Products Co., shingle, (P.), B., 1210. Curing of building material, (P.), B., 1210.

See also Barrett Co. Harshfield, G. S. See Roderick, L. M.

Hart, C., and Shields, P., removing metals as volatile chlorides from ores and other matters containing same, (P.), B., 358.

Hart, C. E., synthesis of sucrose by excised blades of sugar cane, B., 1391.

Hart, E. B. See Arnold, A., Bird, H. R., Kline, O.L., Kohler, G.O., Pearson, P.B., and Schultze, M. O.

Hart, F. L., determination of chlorides in tomato juice, B., 974.

Hart, G. H., and Miller, Robert F., relation of certain dictary essentials to fertility in sheep, A., III, 403.

Hart, H. M., coexistence of dia- and paramagnetism in single crystals of antimony-tin alloys, A., I, 504.

Hart, L. P., measuring discoloration of

painted surfaces, B., 1087. and Cornthwaite, C. R., painting gal-vanised iron; accelerated exposures, B., 369.

See also Gardner, H. A. Hart, M. C. See Anderson, H. P.

Hart, R., analysis of sulphonated (sulphated) oils: Committee report No. 3; determination of inorganic salts in sulphonated oils, B., 464. Fractionation and composition of sulphonated oils, B.,

Hart, R. G. See Sharp, P. F.

Hart, W. B., apparatus for determining odour in water; practical system of dilutions for establishing threshold zone, B., 626.

Hart, W. F. See Niederl, J. B. Hart, W. J., soldering pipe threads to prevent oil leaks, B., 930.

Hart, W. L., machine for translating semifluids and comminuted solids, (P.), B.,

Hart-Carter Co., grain separators, (P.), B.,

Hartdegen, W. See under Metallhütte A. Göhringer & Hartdegen.

Harte, R. A. See Elek, A.

Harteck, P., Knauer, F., and Schaeffer, W., radioactive arsenic, A., I, 490.

and Roeder, E., active hydrogen, oxygen, and nitrogen at pressures up to 20

mm., A., I, 316.

Hartel, F. See Kailan, A.

Hartel, H. von, electric-discharge lamps, (P.), B., 1364.

Hartelius, V., measurement of the growth of yeast from changes of p_H in the culture medium, A., III, 484. See also Nielsen, N.

Hartenstein, H. L., fertiliser [from plants], (P.), B., 1391.

Hartfall, S. J., experiences with a concentrated whole liver extract, A., Ill, 378. Hartford, F. M., tunnel kilns, (P.), B., 550.

Hartford-Empire Co. Sec Riley, C. S. Hartley, C.J., settling tanks and apparatus for removing settled solids therefrom, (P.), B., 303. Rotary scrapers for

sedimentation tanks, (ř.), B., 1288. and Hartley, E., rotary scraping apparatus for sludge-settlement tanks, etc.,

(P.), B., 1288.

Hartley, E. See Hartley, C. J. Hartley, G. S., critical concentration for micelles in solutions of cetanesulphonic acid, A., I, 132. Azo-indicators with a quaternary ammenium group, A., II, 335. cis-Form of azobenzene, A., II,

and Donaldson, G. W., transport numbers of unsymmetrical electrolytes and a simplified moving-boundary appar-

atus, A., I, 244.

Hartley, H., agriculture as a potential source of raw materials for industry? B., 1101.

See also Bennett, A. R.

Hartley, R. V. L., excitation of Raman spectra with the aid of "optical catalysers," A., I, 220.
Hartley, W. See North Brit. Rayon.

Hartman, C. D. See Bell Telephone

Hartman, F. A., Lewis, L., and Toby, G.,

effect of repeated cortin injections on renal excretion in the normal organism, A., III, 436.

and Pohle, W. D., extracts containing cortin, A., III, 228.

See also Lockwood, J. E., and Thorn, G. W.

Hartman, F. W., and Schelling, V., effect of acids on carbocyclic antiseptics, A., III,

Hartman, G., psyllid yellows [of potatoes] in Wyoming, B., 1251.

Hartmann, Adolf. See Fromherz, H., and Schöpf, C.

Hartmann, August, and Amer. Bemberg

Corp., artificial silk, (P.), B., 536. Bauriedel, G., and Amer. Bemberg Corp., artificial silk, (P.), B., 229.

Hartmann, E. C., structural applications of aluminium alloys, B., 355.

Hartmann, F., and Schnlz, E. H., viscosity

of slags and their significance in steel production, B., 1213.

Hartmann, F. K., and Meyer, F. O. W., action of hydrochloric acid on soils under various conditions, B., 1099. Grain-size gradation of crude [soil] olay and baseexchange phenomena in relation to hydrochloric acid extracts of soils, B., Hartmann, H., and Conrad, U., electrolysis in phosphate melts. III. Electrolysis of molybdic acid in fused phosphoric acid and fused alkali phosphates, A., I, 525.

See also Tammann, G.

Hartmann, Karl. See Klönne, M. Hartmann, Kurt. See Hückel, W.

Hartmann, M., gases, sublimation and encrustation products, and thermal waters of the "ladoes" of Merapi, A., I, 381.

and Panizzon, L., preparation of aminoisatin and derivatives [therefrom], A., II, 75.

Hartmann, P. See Testrup, N.

Hartmann, W., artificial rectifying layers with electronic semi-conductors of differ-

ent conducting types, A., I, 64. Hartner-Seberich, R., motor gas producers and their fuels: their state of development with special reference to use of

fossil fuels, B., 201.

Hartong, B. D., coagulable and coldsensitive proteins [of beer and wort], B., 383. Colloid-chemical theory of cooling turbidity and cold-sensitivity [of wort and beer], B., 1395.

Hartree, D. R., theory of complex atoms, A., I, 109.

and Hartree, W., self-consistent field, with exchange, for Cu+, A., I, 163.

and Swirles, (Miss) B., effect of configuration interaction on low terms of the spectra of oxygen, A., I, 271.

Hartree, E. F. See Keilin, D.
Hartree, W. See Hartree, D. R.
Hartshorn, L., Megson, N. J. L., and
Rushton, E., structure and electrical properties of protective films, B., 1073.

Hartung, C., flue gas testers, B., 628.
Hartung, E. F., and Steinbrocker, O., gastric acidity in chronic arthritis, A., III, 255.

Hartung, E. J., Kelly, F. H. C., and Wertheim, J., membrane permeability. I. Measurement of the permeability of membranes to solutes, A., I, 235.

Hartvedt, A., coating for concrete, (P.), B.,

Hartwell, F. J. See Coward, H. F. Hartwich, K. See Schürhoff, P. N. Harvard, R. E., action of X-rays on lactate,

glucose, citrate, and succinate dehydrogenases, A., III, 179.

Harvey, A. See Parker, J. G.

Harvey, C. O., complete analysis of apatite rock, B., 236.

Harvey, D., testing of rubber-insulated wire and cables, B., 702.

Harvey, E. N., measuring surface forces of living cells, A., III, 387.
and Danielli, J. F., elasticity of thin

films in relation to cell surface, A., I, 301.

See also Johnson, F. H., and Shapiro, H.Harvey, E. W. See Barrett Co.

Harvey, F. A., and Birch, R. E., mullite development in super-duty fireclay brick, B., 38.

Harvey, G. G. See Wollan, E. O.

Marvey, R. B., and Food Machinery Corp., treatment of fruit, (P.), B., 978.

Zalar, J., and Landon, R. H., sodium ethyl xanthate as a plant poison, B.,

Harwood, F. C., co-operation between the textile and laundry industries, B., 772. Harwood, H. F. See Ismail, A. M., and Mauritz, B.

Harwood, H. J. See Pool, W. O., and Ralston, A. W.

Hasan, C., and Hunter, R. F., unsaturated and tautomeric mobility of heterocyclic compounds. IX. Methylation of 5-substituted 1-thiolbenzthiazoles, and ultraviolet absorption of mobile and static derivatives of 1-thiolbenzthiazole, A., II,

Hase, R., [optical] pyrometer, (P.), B., 742. Measurement of gas temperatures, B.,

Hasegawa, M. See Hattori, S. Hasegawa, N. See Ishikawa, F. Haselwood, W. E. See Schellenger, N.

Hasenclever, W., oil-in-water emulsions, (P.), B., 645.

Hashi, K., chlorohydroxybehenic and glycidie acids from erucic and brassidic acids, A., II, 85.

Hashima, H. Sec Nishida, K.

Hashimoto, M., cholesterol content of the tuberculous focus in kidney tuberculosis, A., III, 125. Behaviour of bloodcholesterol level in some surgical diseases, particularly in kidney tuberculosis, A., III, 125.

Haskelberg, L. See Weizmann, C. Haskell, N. A., motion of a viscous fluid under a surface load. II., A., I, 125.

Haskins, C. P. See Dornte, R. W.

See also Gen. Electric Co.

Haskins, J. F., and Du Pont Rayon Co., esterification of cellulose, (P.), B.,

Underwood, W. F., and Du Pont Cellophane Co., esterification of cellulosic materials, (P.), B., 127.

See also Du Pont de Nemours & Co., E. I.

Haslam, G. S. See New Jersey Zinc Co. Haslam, H. M. See Bunce, E. H.

Haslam, J. H. See Bailar, J. C., jun.
Haslam, R. T. See Standard-I. G. Co.
Haslewood, G. A. D., and King, E. J.,
determination of bilirubin in bloodplasma, A., III, 290.

See also Bachmann, W. E., and King, E.J.

Hass, G., structure of thin metallic films deposited at low temperatures, A., I,

Hass, H. B., estimation of b.p. as aid in organic research, A., II, 80. See also Norton, F. H.

Hassan, M. K. See Edwards, F. W.Hasse, G., printing [and dyeing] of [cellulose] staple-fibre rayon mousseline fabric, B., 897.

Hassé, H. R. See Baber, T. D. H.
Hassebrauk, K. See Gassner, G.
Hassel, O. See Finbak, C., and Frivold, O. E.

Hasselt, W. van. See Kögl, F.

Hassid, N. J. See Calico Printers' Assoc. Hassid, W. Z., determination of sugars in plants, A., III, 322.

and Chandler, W. L., polysaccharide synthesised by a soil micro-organism, A., II, 87.

and Dore, W. H., molecular structure of canna starch, A., II, 400. Hasskó, A. See Scheff, G.

Hassler, G. L., and Gulf Res. & Development Co., breaking of emulsions, (P.), B., 1231.

Hassler, J. W., use of activated carbon for correction of flavours [in food materials], B., 1128.

Hastings, A. B., and Eichelberger, L., exchange of salt and water between muscle and blood. I. Effect of an increase in total body-water produced by intravenous injection of isotonic salt solutions, A., III, 87.

See also Browman, A. A., Eichelberger, L., and Stotz, E.

Hastings, E. G., limitations of the direct microscopic count of bacteria in milk, B., 1399.

and Beach, B. A., production of milk of abnormal composition by animals free from udder streptococci, B., 611. See also Linneboe, J. \hat{B} .

Hastings, J. L. See Young, R. C.
Hastings, R. J. See Newton, W.
Hata, C. See Kafuku, K.
Hata, S., native bismuth and bismutite

from Ishikawa, A., I, 156.

Hatch, G. B., and Adkins, H., replacement series of alkyl groups as determined by alcoholysis of esters. II., A., II, **4**39.

Hatch, M. B. See Jones, J. S., and Wiegand, E. H.

Hatch, T., design of exhaust hoods for dust-control systems, B., 190. Industrial sanitation; control of industrial dust, B., 1138.

Hatchel, F. Sec Dozois, K. P.

Hatcher, R. A., antidotal action of potas-

sium permanganate, A., III, 28.

Hatfield, I., toxicity [towards wood organisms] in relation to position and number of chlorine atoms in certain chlorinated benzene derivatives, B., 916.

Hatfield, J. E., and Harner, H. R., storage battery life tests. I. Laboratory life testing. II. Service life testing, B., 802.

Schafer, C. J., and Brown, O. W., effect of acetic acid on the lead storage battery, B., 254.

Hatfield, P. E. See Parker, V. E.

Hatfield, W. H., second report of the Steel Castings Research Committee.
Appendix I. Bibliography on the fluidity and viscosity of metals.
Appendix II. Present position concerning the pyrometric measurement of topping and casting temperatures, B., 45. New materials for construction of machinery in sugar factorics and distilleries, B., 961.

and Bridge, J. F., corrosion-resisting alloy steels, (P.), B., 1225.
Shirley, H. T., Swinden, T., Stevenson, W. W., Hudson, J. C., and Banfield,

T. A., subsidiary corrosion tests on the low-alloy structural steels exposed in Part III of the Corrosion Committee's experimental programme, B., 566. Hathaway, I. L., and Davis, H. P., vitamin-

A content of sour-cream butter, sweetcream butter, and margarines, B., 181.

Hatherell, G. A., and Garbutt, F. A., resinous material suitable for use in compounding chewing gum, (P.), B., 469.

Hathorn, Davey & Co., Ltd., and Lupton, H. R., disintegrators for fluid-borne solids, (P.), B., 856.

Hathorne, B. L., and Zametkin, R., stainless steel in rayon and silk [dyeing] industries, B., 30.

Hatt, H. H. See Drew, H. D. K. Hatta, K., meat and fish extracts, (P.), B., 1266.

Hatta, S., extraction velocity of solids. I. Theory of [solvent] extraction of a slab, B., 736.

Katori, M., and Itô, U., low-capacity orifice-meters of glass. I. For liquid measurement. 11. For gas measurement, A., I, 153.

Hatta, T. See Igarashi, M. Hattori, S., Hasegawa, M., and Hayashi, K., quercetin glucoside from Trifolium flowers, A., III, 503.

and Hayashi, K., anthoeyanins. II.
Pigment of red autumn leaves of species of Acer, A., II, 464.

Hattox, E. M., and De Vries, T., thermodynamics of aqueous indium sulphate solutions, A., I, 30.

Hatz, E. B., colorimetric determination with aid of the Lange-Roth photometer. I.,

Hatziolos, B., storage of bull sperm for artificial impregnation, A., III, 458. Haubrich, R. See Ebbecke, U. Hauck, H. M. See O'Hara, P. H.

Haucke, W., gold-sodium alloys, A., I, 127. Metals and alloys. XXIV. Constitu-tion of sodium-gold alloys, A., I, 508. Sec also Zintl, E.

Haufe, W. See Simon, Arthur. Hauffe, K. See Gundermann, J.

Haug, R., film tests with the Erichsen

machine, B., 811. Haugaard, G., glass electrode, A., I, 332. Mode of action of the glass electrode, A., I, 567.

Hauge, S. M. See Loy, W. C.

Haugen, M. See Pinkus, A.

Haught, J. W., Rodman, E., and Du Pont Viscoloid Co., laminated article [glass], (P.), B., 1207. Haughton, C. O., determination of acctone,

A., II, 229.

Haughton, J. L., alloys of magnesium. VI. Constitution of magnesium-rich alloys of magnesium and calcium, A., I, 454. and Schofield, T. H., alloys of magnes-

ium. V. Constitution of magnesiumrich alloys of magnesium and cerium, A., I, 73.

See also Payne, R. J. M.

Haughwout, L. B. Sec Ziegler, F. K. Hann, F., toxic action and detection of

metallic phosphides, A., III, 95. Haun, J. C. See Merrill Co., and Mills,

L. D.Haupt, H., and Steffens, W., softening of drinking water in waterworks, B., 298.

Haupt, W. See Tschesche, R.

Haurand, C. II. See Vahlteich, H. W. Haurowitz, F., reaction between hæmin and hydrogen peroxide, A., III, 411.

[with Brdicka, R., and Kraus, F.], catalase and peroxidase activity of hemin, A., III, 247.

[with Kraus, F., and Marx, F.], combination between antigen and precipitating antibody, A., III, 85.

Haury, V. G. See Hirschfelder, A. D. Hausam, W., amount of salt absorbed and of water lost by hides and skins when dry-salted, B., 1093.

Hauschild, F, action of catalysin (thionine) in methemoglobin[-forming] poisoning, A., III, 265.

Hauschild, K., fractional vacuum distillation of solid substances, A., I, 537.

Hausen, II., recently discovered kaolinsandstone occurrence in the crystalline limestone of Pargas Al Island, Abo, S.W. Finland, A., I, 334.

Hausen, S. von, rôle of vitamin-C in growth of higher plants, A., III, 79.

See also Virtanen, A.I.Hauser, C. R., and Renfrow, W. B., jun., removal of HX from organic compounds by means of bases. III. Rates of removal of hydrogen bromide from substituted N-bromobenzamides and their relative ease of rearrangement in presence of alkali; Hofmann rearrangement, A., II, I00. Condensations brought about by bases. I. Condensation of ethyl isobutyrate to ethyl isobutyrylisobutyratc, A., II, 482.

Hauser, E. A., colloid-chemical aspects of clay as a loading material [for paper], B., 1036. Uses of latex in the textile

industry, B., 1196.
and Bixby, W. F., highly transparent mixtures containing magnesium carbonate [in rubber], B., 160.

Edgerton, H. E., Holt, B. M., and Cox, J. T., jun., high-speed motion-picture camera in study of surface tension, A.,

and Frosch, C. J., capillary chemistry and fluorescent light microscopy, A., I, 378. and Reed, C. E., centrifuging in rotating hollow cylinders, A., 1, 100. Thixotropy. I. Measuring particle-size distributions tribution in colloidal systems. II. Thixotropic behaviour and structure of bentonite, A., I, 18I, 615.

See also Edgerton, H. E., and Frosch, C, J.

Hauser, M., fired articles of which silicon is a constituent, (P.), B., 1360.

Hauser, W., physiology of tannin in the plant cell, A., III, 48. Precipitation of albumin by tannin and the tanning process, B., 817.

Hausman (Miss) M. J., tung oil, B., 58. Fats for the soap kettle, B., 364. Oiticica oil, B., 366. Fatty acids, B., 756. Linseed oil, B., 1079.

Hausmann, E., liquor filtration from the biological viewpoint, B., 177. See also Butenandt, A.

Hauss, L. See Ledrut, J.

Haussmann, G., detection of bruises in fruits, B., 615.

Haut, I. C., effect of fertilisers on the handling qualities of strawberries and tomatoes, B., 1387.

Webster, J. E., and Cochran, G. W., influence of commercial fertilisers on firmness and composition of strawberries and tomatoes, B., 601.

Hautot, A., and Serpe, J., K-rays of boron, A., I, 386. See also Trillat, J.J.

Hauwaert, M. van, amylolytic value of pharmaceutical specialities, B., 285.

Haux, E. H., and Duplate Corp., plasticising a resin and forming it into a sheet, (P.), B., 1374.

Haux, R. See Leclerc, E.

Havas, L., effects of colchicine and of Viscum album preparations on germination of seeds and growth of seedlings, A., III, 240. Colchicine, "phytocarcinomata," and plant hormones, A., III, 367.

and Mendeléeff, P., effect of liposarcoma (Murrey) and organ extracts on germination and growth of wheat, A., III, 460.

Havemann, R., and Wolff, K., protein nature of bee- and Crotalus-poisons. I., A., III, 297.

Haven, F. L., phospholipin metabolism of

tumours, A., III, 173. Havenhill, R. S., heat generation and anisotropy of rubber compounds in the flexometer, B., 373.

Havinga, E., and De Wael, J., investigation of unimolecular films by electron diffrac-

tion, A., I, 290. Havis, L., and Gourley, J. H., relation of cultural systems to soil organic matter, B., 596. Soil organic matter and porosity of an orchard soil under different cultural systems, B., 1097.

Hawaiian Pineapple Co., Ltd. See Wendt, W. A.

Hawes, F. O., effect of changes in composition on combustion of town gas, B., 313.

Hawes, G. W., and Acme Chem. Co., devices for projecting pulverised materials, (P.), B., 1288.

Hawker, L. E., effect of accessory growth-substances on sporulation of Melanospora destruens and of other fungi, A., III, 49.

Hawking, F., chemotherapeutic action. I. Absorption of arsenical compounds and tartar emetic by normal and resistant trypanosomes and its relation to drug-

resistance, A., III, 177. Hennelly, T. J., and Quastel, J. H., trypanocidal activity and arsenic content of cerebrospinal fluid after administration of arsenic compounds, A., III, 177.

Hawkins, C. L. See Hawkins, Ltd., H. Hawkins, J. W. See Cox, W. V.

Hawkins, L. E.See Darlow, A. E. Hawkins, N. C. See Morgan, A. F. Hawkins, W. L. See Bell, A.

Hawkins, Ltd., H., and Hawkins, C. L., roofing tiles, (P.), B., 350.

Hawks, J. E., Dye, M., and Bray, M. M.,

teclmique for metabolism studies in preschool children: statistical determination of its reliability, A., III; 258 Effect of diet on the constancy of urinary nitrogenous constituents excreted daily by pre-school children, A., III, 467.

Hawley, C. G., and Centrifix Corp., petroleum refinement, etc., (P.), B., 1016.

Hawley, E. E., Daggs, R. G., and Stephens, D. J., effect of administration of acid and alkaline salts on the ascorbio acid contents of guinea-pig tissues, A., III,

Fraser, J., Button, L., and Stephens, D.J., effect of ingestion of acid and alkali on amount of urinary vitamin-C, A., III, 44.

and Stephens, D. J., urinary excretion of ascorbic acid, A., III, 44.

Hawley, I. M., and Hallock, H. C., life history and control of the Asiatic garden beetle, B., 274.

Hawley, J. B. See Sloan, E. C. Hawley, J. W., and Wilson, W., determination of lead in water, B., 626.

Hawley, T. See Wallerstein, L. Hawley, T. G., jun. See Wallerstein, L. Hawn, M. C. See Roderick, L. M.

Haworth, E., and Macdonald, Adam D., histamine in cotton dust and in the blood of cotton workers, A., III, 195.

Haworth, F. E., energy of lattice distortion in hard-worked permalloy, A., I, 556. Energy of lattice distortion in cold-worked permalloy, A., I, 602.

Haworth, M. E., and Jeffrey Manuig. Co., apparatus for separating materials by fluid streams, (P.), B., 4.

Haworth, R. D., and Kelly, W., constituents of natural phenolic resins. VIII. Lariciresinol, cubebin, and some stereochemical relationships. IX. Structure of lariciresinol; preliminary experiments on the synthesis of lignandiols,

A., II, 202, 497.

Haworth, W. N., size of polysaccharide

molecules, A., II, 52.

Hirst, E. L., and Chamberlain, K. A., acetone derivatives of gluconic acid,

A., II, 274.

Hirst, E. L., and Isherwood, F. A., polysaccharides. XXIII. Determination of the chain length of glycogen. XXIV. Yeast mannan, A., II, 232, 277. Degradation of methylated inulin hexamethyldifructosan, A., II, 277.

Hirst, E. L., and Jones, J. K. N., gluco-ascorbic acid, A., II, 228.
Hirst, E. L., Kitchen, H., and Peat, S.,

polysaccharides. XXV. a-Amylodex-

trin, A., II, 277. Hirst, E. L., and Lyne, R. R., watersoluble polysaccharide from barley

leaves, A., II, 231.

Hirst, E. L., Smith, F., and Wilson, W. J., isomerisation of 2:3-dimethyl-

ascorbic acid, A., II, 274.

Hirst, E. L., and Woolvin, C. S., ring structure of xylal, A., II, 277.

Raistrick, H., and Stacey, M., polysaccharides synthesised by micro-organisms. III. Molecular structure of galactocarolosc produced from glucosc by Penicillium Charlesii (G. Smith), A., II, 178.

Hawthorn, J., [domestic base-exchange]

water softener, (P.), B., 6. Hawthorne, C. R. Sco Whitehead, T.

Hawthorne, J. R., and Harrison, D. C. mannose as a possible precursor of ascorbic acid in the tissues of the rat, A., III, 364.

Hawtin, P. R. See Brit. Celanese. Haxby, R. O. See Williams, John H.

Haxel, O., nuclear transformation of boron by slow neutrons, A., I, 212.

Haxthausen, H., arsphenamine sensitisation of the skin, A., III, 177.

Hay, D. L., sp. gr. indicator, (P.), B., 997.

Hay, F. W., electrodeposited lead for protection of iron and steel, B., 682.

Hay, R., McIntosh, A. B., Rait, J. R., and White, James, slag systems, B.,

White, James, and Caulfield, T. H., ternary system FeO-Al₂O₃-SiO₂, A., I. 463.

White, James, and McIntosh, A. B., slag systems, A., I, 309.

See also Graham, R.

Hay, R. H. See Robertson, J. K.

Hayakawa, K., treatment of aluminium or aluminium alloy, (P.), B., 801.

Hayashi, C., amino-acids of silkworms, A.,

Hayashi, H. See Asahina, Y.

Hayashi, K., anthocyanins. III. Pigment of the scarlet blossoms of Lycoris radiata, A., II, 464.

Sec also Hattori, S. Hayashi, M., Namikawa, H., and Morikawa, I., condensation of acetoanthranil derivatives with benzene, A., II, 198. Preparation of acetoanthranil derivatives, A., II, 207. Hayashi, M., and Tsuruoka, S., alkyl methylphthalates, A., II, 194. Derivatives of benzoylbenzoic acids. I. 2-(2'- and 2-(4'-hydroxybenzoyl)-3methylbenzoic acid and 2-(4'-chlorobenzoyl)-3-methylbenzoic acid. II. 2-Benzoyl-3-methylbenzoic acid and 2-benzoyl-6-methylbenzoic acid, A., II. 244.

Tsuruoka, S., and Nakayama, A., derivatives of benzoylbenzoic acids. III. 3(6?) - Nitro - 2-benzoylbenzoic acid, 3(6?) - nitro - 2 - [2'(4'?) - hydroxybenzoyl]benzoic acid, 3(6?)-nitro-2-(2':5'-dimethylbenzoyl)benzoic acid and 5(4?)-nitro-2-(2':5'-dimethylbenzoyl)benzoio acid, A., II, 244.

Hayashi, Y. Sce Ueno, Sei-ichi. Hayasi, K. Sco Ozeki, S.

Hayasi, T., extra lines of the K spectra of nickel and copper, A., I, 159. X-Ray K absorption spectrum of copper, A., I, 159. K Absorption spectra of nickel. II., A., I, 159. K Absorption spectra of elements nickel and copper in certain nickel-copper alloys, A., I, 177.

Haycock, G. W. See Barr, K. Haydak, M. H., changes in weight and nitrogen content of adult worker bees

on a protein-free diet, A., III, 345. Hayden, C. E., calcium metabolism and

therapy, A., III, 475. Haydon, F. G. See Debenham, W. R. Hayes, A. H., steam-heating of viscous oil, B., 111.

and Griffis, R. O., new metal for deep stampings, B., 918.

Hayes, F. R., and Ross, D. M., total fat content of developing salmon eggs, A., III, 56.

Hayes, F. W. See Hedley, E. P. Hayes, H. K., agricultural research in China, B., 704.

Hayes, J. F. See Fifield, C. C. Hayes, J. J. See Fessler, J. H. Hayes, J. W., Britton, H. C., and Solvay Process Co., sodium nitrite, (P.), B., 542.

See also Sundstrum, C.

Hayes-Gratze, E. V., [machine for] softening, scutching, and separating vegetable and other fibres, (P.), B., 658. Haymaker, W. See Anderson, E.

Hayman, D. F., and Adler, Sol, microanalysis of nitrogen in certain pyrimidines by the Dumas method, A., II, 314.

Hayman, R. F., corrosion, B., 1066. Hayner, L. J., shot effects of secondary

clectron currents, A., I, 209.

Haynes, E., Tompkins, C. A., Washburn, G., and Winters, M., bactericidal action of pectin, A., III, 435.

Haynes, S. K. See Millikan, R. A.

Haynes, W. C. Seo Hucker, G. J.

Haynes Stellite Co., [ferrous] welding rod or electrode, (P.), B., 1226.

Wissler, W. A., and Miller, W. B., welding rod or electrode, (P.), B.,

Haynn, R., difficulties in dyeing [wool + viscose staple fibre | mixture fabrics and yarns, B., 660.

Hays, H. C., thermodynamic reactions involved in cracking of propane gases, B., 108.

Hays, H. W. See Parkins, W. M. Hays, M. B., Elmquist, R. E., and Hardy, J. I., serviceability test on blankets made from four blends of wool, B., 1185. Hayward, C. R. See Floe, C. F.

Hayward, J. W., Bohstedt, G., and Fargo, J. M., soya-bean oil meals prepared at different temperatures as feed for

pigs, B., 184. Steenbock, H., and Bohstedt, G., effect of heat as used in extraction of soya-bean oil on nutritive value of protein of soya-bean meal, B., 82. Effect of cystine and cascin supplements on nutritive value of protein of raw and heated soya beans, B., 616.

Hayward, S. J., and Loeb, L., effects of sugar, glycerol, and urea on hormones of cattle anterior pituitary glands, A., III, 320.

Hazard, R., and Vaille, C., acidosis and hyperglycamia [in the rabbit] caused by the ammonium ion, A., III, 22.

Vaille, C., and Cagnaux, Y., comparative effect on the blood-sugar of the rabbit of sodium fluoride, chloride, bromide, and iodide, A., Ill, 389.

Hazel, F. See Willey, A. R.

Hazel-Atlas Glass Co. See Stenhouse, D. Hazlehurst, T. H. See Neville, H. A.

Hazlet, S. E., [benzene- and p-toluene-] sulphonic acid esters, A., II, 140.
Bromination of 4-diphenylyl benzenesulphonate, A., II, 332.

Hazlewood, S.J. See Earl, J.C.

Hazslinszky, B., microscopical examination of cinnamon, B., 1127.

Head, F. S. H. See Drew, H. D. K. Headington, C. E. See Kurtz, S. S., jun. Headlee, T. J., and Endowment Found-ation, [insecticidal] treatment of materials electrostatically, (P.), B., 74. Heal, R. E., Schmitt, J. B., and Ginsburg,

J. M., wetting agents and their application with insecticides and fungicides, B., 711.

Heald, F. D. See Baker, K. F., Holton, C. S., and Schnellhardt, O. F.

Heald, W. L., effect of different types of shortening on white pan bread, B., 1119.

and Flour Mills of America, testing of dough, (P.), B., 727. Healey, A. T. Sco Neumann, E.

Healey, N. See Thompson, H. W.
Healy, C. S., apparatus for testing the
viscosity of liquids, (P.), B., 742. Apparatus for testing the viscosity of oil, (P.), B., 1166.

Healy, J. J., jun., and Merrimac Chem. Co., pigmented paper, (P.), B., 536.

Hearn, W. L. Sec Schur, M. O. Hearne, G. See Shell Development Co. Hearns, H. G. H., and Umpleby, E.

control of insect pests of nursery fruit stock, B., 1106. Hearon, W. M., and Gustavson, R. G.,

semimicro-qualitative test for the nitrogroup in organic compounds, A., II, 359. Heastie, B., vacuum refrigeration, B., 628.

Heat & Air Systems, Ltd., and McFarlane, J. D., enamelling, cleaning, plating, and similar treatment of manufactured articles, (P.), B., 99. Heath, A. R. N. See Hicks, (Sir) M.

Heath, B., standardisation of odour and

flavour, B., 392. Heath, D. P., one-piece sheet-metal evaporator, (P.), B., 741.

Heath, S. B. See Dow Chemical Co.

Heathcote, R. St. A., hexamine as a urinary antiseptic. I. Rate of hydrolysis at different hydrogen-ion concentrations. II. Antiseptic power against various bacteria in urine, A., III, 37. Heathcote, R. St. A., pharmacological action of certain derivatives of pyrrole, pyridine, and pyrazole, A., III, 264.

Heatley, A. H., collector theory for ions with Maxwellian and drift velocities,

A., I, 488.

Heatley, N. G., digestive enzymes of the Onychophora (Peripatopsis spp.), A., III, 220.

and Lindahl, P. E., amphibian organis-ation centre. V. Distribution and nature of glycogen in the amphibian embryo, A., III, 198.

Waddington, C. H., and Needham, J., amphibian organisation centre. VI. Inductions by the evocator-glycogen complex in intact embryos and in ectoderm removed from the individuation field, A., III, 198.

See also Manton, S. M.

Heaton, J. S., insoluble azo-dyes on textile fibres, (P.), B., 232. Stabilised diazo-compounds, (P.), B., 528.

Hebb, M.H., and Purcell, E.M., theoretical study of magnetic cooling experiments, A., I, 353.

Hebberling, H., water-absorption of paint films as a measure of rust inhibition of pigments, B., 467.

Heberer, A. J., uses of soya-bean oil in paints and varnishes, B., 944.

Heberlein, G., and Heberlein Patent Corp., products from artificial silk, (P.), B., Î192.

Heberlein, G., jun., and Heberlein Patent Corp., transparent [cotton] fabric, (P.), B., 233.

Heberlein & Co., Akt.-Ges., crease-resisting textiles made of cellulose-containing fibres, (P.), B., 131. Permanently stiffened washable materials, (P.), B., 663. Rendering textile webs containing cellulose water-repellent and crease-proof, (P.), B., 1331.

Heberlein Patent Corporation. See Heberlein, G., and Heberlein, G., jun.

Hebermehl, R. See Schultze, G. Hebler, F. See Akt.-Ges. der Chem. Prod.-Fabr. Pommerensdorf-Milch.

Hebley, H. F., and Prins, K., dryer, (P.), B., 2.

Hechelhammer, W. See Ziegler, K.

Hechenbleikner, I., and Chem. Construction Corp., sulphur dioxide gas, (P.), B., 136. Contact method of sulphuric acid manufacture, (P.), B., 666. Treatment of sulphur-bearing ores, (P.), B., 910.

See also Morton, A. A.

Hecht, F., counting of a-particles from uranium, A., I, 160. Applications of and devices for quantitative mineral micro-analysis, A., I, 380. Microanalytical determination of water in inorganic substances. I., A., I, 529. Filter beakers in quantitative microanalysis, A., I, 635.

See also Holmes, A.

Hecht, H., tests for coarse ceramics [bricks] suitable for standardisation, B., 550.

Pulfrich, M., and Hornke, W., carbon dioxide in testing [building] lime, B., 786.

Hecht, M., and Civin, H., enzyme action. I. Determination of pepsin and trypsin in yeast, A., III, 68. See also Rodman, C. J.

Hecht, S., Chase, A. M., and Shlaer, S., diffusion coefficient and molecular size of visual purple, A., III, 341.

Hecht, S., Chase, A. M., Shlaer, S., and Haig, C., regeneration of visual purple in solution, A., III, 9.

Heek, A., and Cook Paint & Varnish Co., varnish resins, varnishes, and similar coating compositions [from phenols and phthalic anhydride], (P.), B., 64. Resins [from phenols and phthalic anhydride], (P.), B., 64. Varnish bases [from phenols and phthalic anhydride], (P.), B., 64.

Heck, K., Brown, W. H., and Kirk, P. L., quantitative drop analysis. IX. Determination of blood-glucose, A., III, 412.

Heekel, H. See Pomp, A.

Hecker, E., benzol recovery, B., 406. Hecker, G. Sec Berkner, F. Hecker, J. C. Sec Hickman, K. C. D. Heekermann, H., preservation of perishable

articles and materials, (P.), B., 631. Heckert, W. W. See Du Pont de Nemours & Co., E. I.

Heckman, E. M., cleansing fluid filtration, (P.), B., 1147.

Heckmann, W., accelerating and improving the softening of water, B., 627.

Hector, L. G., and Eckstein, G. R., flux balance for the measurement of magnetic susceptibilities in alternating fields of

low intensity, A., I, 583. Hedberg, C. W. J., design of gas-cleaning installations, B., 855.

Hesson, R. B., and Research Corp., electrical gas treatment, (P.), B., 695.

Hedges, L. M., whiteware research. IV. Production of a cone 4 single-fire wall-tile body high in pyrophyllite, B., 1050.

Hedley, E. P., physical properties of sugar cane, B., 74.

and Hayes, F. W., chemical composition of sucrose-free bagasse, B., 24.

Hedley, N. See Barsky, G. Hedman, F. A. See Culbertson, J. L. Hédon, \hat{L} . See Cristol, P.

Hedquist, A. J., Gould, R. E., and Wilson, E. W., casting of all-kaolin bodies of true porcelain and china types, B., 912. Sec also Gould, R. E.

Hedrich, C., new phosphates, A., I, 628. Hedrick, G. W. See Huston, R. C. Hedrick, J. E. See Winters, C. E.

Hedvall, J. A., reactions in the solid state. I. Reactivity in the solid state, A., I,

and Rosen, U., reactivity of alloys during transformations in solid state. II., A., I, 74.

Heede, A., and Stensig, S., iodometric determination of salicyclic acid, thymol, and β-naphthol, A., II, 130. Heen, E. See Lunde, G.

Heeramaneck, V. R., and Shah, R. C., imidochlorides. V. Synthesis of hydroxycarbethoxyphenyl-a- and -β-naphthaquinolines, A., II, 306. Tautomerism of ethyl 4-hydroxy-2-phenylquinoline 3-carboxylate, A., II, 389.

Heering, H. See Fries, K.

Heerswynghels, J. van, analeptic respiratory action of the ophylline-ethylenediamine complex, A., III, 109.

Heertjes, P. M., Kolb, A. L., and Waterman, H. I., diazotisation on the film apparatus; dyes derived from tetrazotised m-phenylenediamine, B., 1025.

Hees, W., reactions and function of stannous chloride in the brightening process of Turkey-red dyeing, B., 896. Mercerisation of mixture yarns [of cotton and viscose staple fibre], B., 897. Heffe, W. See Kröhnke, F.

Heffner, L. L., and Hooper & Sons Co., W. E., fabric for humidification of air, (P.), B., 1331.

Hefter, J. M., and Kirjan, V. M., biochemical changes in the fatigued organism; effect of muscular exercise on the aminoand residual nitrogen contents of the blood, A., III, 210.

Hegedüs, A., hypersensitivity and increased resistance of bacteria towards antiseptics, A., III, 148. Vital staining of bacteria on substrates containing dyes, A., III, 148.

Hegedüs, B. See Ruggli, P.

Hegedüs, M., micro- and semimicroseparation and determination of sodium and potassium, A., I, 46.

Heggie, R. See Prescott, S. C.

Hegnauer, A. H., and Robinson, E. J., water and electrolyte distribution in plasma, red blood cells, and muscle after adrenalectomy, A., III, 54.
See also Cori, C. F., and Robinson,

E. J.

Hegner, R., and Hewitt, R., rate of maturation of young red cells in canaries, A., III, 335.

Heicken, K., changes in p_H of uninoculated nutrient broth during sterilisation and

storage, A., III, 227.
Heid, J. B. See Universal Oil Products

Heide, F., naturally-occurring silver amalgams, A., I, 588.

Heidelberger, M., structure of natural and synthetic antigens, A., III, 55.

and Kabat, E. A., chemistry of bacterial III. agglutination. Quantitative theory of agglutination, A., III, 115.

and Kendall, F. E., specific polysaccharide of the type I pneumococcus, A., III, 55. Theory of precipitin reaction. II. An azoprotein-antibody system. III. Reaction between crystalline ovalbumin and its homologous antibody, A., III, 115.

Kendall, F. E., and Scherp, H. W., pre-parative changes necessitated by a quantitative study of precipitating power of pneumococcus polysaccharīdes, A., III, 55.

and Menzel, A. E. O., specific and nonspecific cell polysaccharides of a human strain (H-37) of tubercle bacillus, A., III. 183.

See also Kendall, F. E.

Heidelmann, J. See Fischer, Hans. Heidemann, E., influence of sonic and ultrasonic [vibrations] on aërosols, A.,

Heidhausen, G., applied spectrography in the metal-working industries. III. Quantitative spectral analysis, particularly for the estimation of silicon in cast iron, B., 444.

Heidtkamp, G., and Endell, K., existence of compounds in molten glass, B., 545.

Heidnschka, A., determination of nicotine in tobacco smoke, B., 187.

and Nier, E., wool fat, A., II, 398. and Ober, H., photometric determination of blood-potassium, A., III, 413.

Heil, H., scaling compositions for air tubes of tyres, etc., (P.), B., 469.

Heilberg, A., moulding of articles from [a plate of thermoplastic materials, (P.), B., 814.

Heilbron, I. M., pigments associated with fatty tissues of plants and animals, A., III, 296.

Heilbron, I. M., and Gillam, A. E., pigments associated with the fatty tissues of plants and animals, A., III, 252.

Jones, E. R. H., and Spring, F. S., sterol group. XXXII. Bromination of 6-ketocholestanyl acetate, A., II, 344.

Moffet, G. L., and Spring, F. S., sterol group. XXXI. Structure of lumisterol, A., II, 190.

See also Batty, J. W., Beynon, J. H., and Gillam, A. E.

Heilingenstaedt, W., temperature and through-heating of the charge in soaking pits, B., 351. Scaling of steels heated with rich gas, B., 919.

Heilman, R. H., heat transmission through bare and insulated furnace walls, B.,

1283.

Heilmann, R., isoamylidencacetone, A., II, 323. Isomerism of $a\beta$ -ethylenic ketones. I. isoButylideneacetone. II. isoAmyl. ideneacetone, A., II, 323.

Heilmeyer, L., and Beickert, P., oxidation product of urobilin, A., II, 36.

Heilner, G., and Chem. Fabr. J. Wiernik & Co., 5-furfuryl-5-isopropylbarbituric acid, (P.), B., 290.

Heim, F., difference in action of Digitalis

purpurea and D. lanata; (investigation with cold-blooded animals), A., III, 267. Effect of urea on the degree of hydration of proteins, A., III, 296. Heiman, J. D. See Mirsky, I. A.

Heiman, V., Carver, J. S., and St. John, J. L., protein requirements of laying hens, B., 185.

and Wilhelm, L. A., relation between yolk index, percentage of firm white, and albumin index [in hens' eggs], B., 973.

See also Carver, J. S.

Heimann, H., and Bayerische Stickstoff-Werke, A.-G., ammonium sulphate, (P.), B., 908.

Heimann, P., synthesis of 2:4-dihydroxyquinoline and its derivatives; their constitution, A., II, 388.

See also Meyer, André.

Heimann, W., light-sensitive electrodo of photo-electric cells, (P.), B., 57.

Heimberger, W., pickling of [ferrous] metals, (P.), B., 455.

Heimer, A., band spectrum of bismuth deuteride, A., I, 60. Band spectrum of cobalt hydride, A., I, 165. Red band spectrum of nickel hydride, A., I, 279.

Heimer, T., band spectrum of gold hydride, A., I, 60.

Hein, F. [with Daniel, W., and Schwedler, H.], reaction between silver permanganate and hydrogen, A., I, 472.

and Daniel, W., solubility of silver permanganate in water and in aqueous solutions of silver nitrate and perchlorate, A., I, 611.

See also Regler, H.

Hein, M. A., and Cook, A. C., effect of method and rate of grazing on beef production and plant population of pastures

at Beltsville, Maryland, B., 826.

Heinbecker, P., Somogyi, M., and Weichselbaum, T. E., quantitative assay of insulin effect, A., III, 322. Effect of diet on insulin response in normal and hypophysectomised dogs, A., III, 438.

See also Weichselbanm, T. E., and White, H. L.

Heindl, R. A., and Mong, L. E., Young's modulus of elasticity, strength, and extensibility of refractories in tension, B., 38. Heine, storage of fresh milk, B., 179.

Heineman, \hat{P} . G., antiseptic properties of alkyldimethylbenzylammonium chloride, A., III, 489.

See also Winthrop Chem. Co. Heinemann, G., and Rahn, H. W., determination of total reducible sulphur in caustic soda, B., 1333.

Heinemann, M., relations between diet and urinary output of thiosulphate (and ascorbic acid); human requirements for

vitamin-C, A., III, 77. Heinicke, A. J., and Childers, N. F., influence of water deficiency on photosynthesis and transpiration in apple leaves, A., III, 285.

Heinle, R. W. See Taylor, F. H. L. Heinrich, E. See Pfeiffer, P.

Heinrich, F., and Petzold, F., use of overhead heating in analytical laboratories. II., A., 1, 427.

and Schuth, E., limits of effectiveness of rust-preventing oils, B., 566.

Heinrich, K., flue gas separators, B., 508. Heinrich, M. S. Sec Krakau, K. A. Heins, P. S., thenardite crystals from Rhodes Marsh, Nevada, A., I, 483.

Heinsen, H. A., production of tyramine in warm-blooded animals, A., III, 91, 305. Heintke, G. See Neumann, B.

Heintz, E. See Vlès, F.
Heintz, K. See Stollé, R.
Heintzsch, B. See Fingerling, G.

Heinz, H. J. Sec Leithe, W.

Heinze, R., Borsig-Geissen low-temperature [carbonisation] process [for coal], B., 1293. Benzorbon process for recovering gaseous hydrocarbons from gases by adsorption on active carbon, B., 1295. Production of petrol by polymerisation [of unsaturated hydrocarbons in petroleum cracking gases], B., 1297.

and Farnow, H., reactivity of brown-coal

cokes, B., 861.

and Hopf, H., applicability of laboratory methods for determining the ease of ignition [cetene number] of Diesel fuels, B., 110.

and Marder, M., storage stability of

Diesel fuels, B., 408.

and Tschirpig, G., application of brown-coal cracked bitumen as a roadbuilding material, B., 406.

Heinze, W., and Wagener, S., heat transmission by radiation, B., 987.

Heinzelmann, H., electro-filters in boiler

and gas-producer practice, B., 1143.

Heirman, P., effect of tyrosinase on the oxidation and cardiac effects of adrenaline and tyramine, A., III, 220.

Heise, R. See Holtz, P.
Heisenberg, W., "showers" in cosmic rays, A., I, 6.

Heiser, F. See Schnelle, F.

Heisey & Co., A. H. See Wooles, R. L. Heisig, G. B., and Amdur, E., preparation of constant-boiling hydrobromic acid, A., I, 373.

Heiss, J., oligodynamic action of silver. I., A., III, 228.

See also Fromherz, H. Heiting, H. See Hahn, A.

Heitler, W., absorption of the soft component of cosmic radiation, A., I, 491. Analysis of cosmic rays, A., I, 515. See also Bhabha, H. J., and Fröhlich, H. Heitz, W., desirable properties of drilling muds, and their production and control, B., 642.

Heiwinkel, H. See Euler, H. von, and Schlenk, F.

Hejduk, \hat{F} ., and Neumann, J., apparatus for mixing of liquids, (P.), B., 306.

Hektoen, L., reactions to non-specific protein treatment of infectious discases, A., III, 257.

and Cole, A. G., precipitin reactions of ovalbumins, A., III, 293.

and Welker, W. H., precipitinogenic action of human plasma and its constituents, A., III, 6.

Helan, B., consumption and utilisation of heat in cement ovens, B., 242. Insulation of ceramic kilns, B., 544.

Helberg, E., determination of caffeine and extract in coffee, B., 1127.

Helberger, J. H., action of cuprous cyanide on o-halogenoacetophenones, A., II,

and Rebay, A. von, action of cuprous cyanide on o-halogenoacetophenones. II., A., II, 471.

Held, E. F. M. van der, and Miesowicz, M., measurement of diffusion of metal atoms in gases at room temperature by an optical method, A., I, 454.

Held, N. A., adsorption of organic substances on the surface of crystals and the influence of electrolytes on the extent of

adsorption, A., I, 612.

Helferich, B., ascorbic acids, (P.), B., 393. and Göller, W., emulsin. XXIX. Simultaneous fission of several substrates; β -d-galactosidase of emulsin

from sweet almonds, A., III, 313. and Grünler, S., emulsin. XXVIII. p-Toluenesulphonic esters of vanillin-B-d-glucoside and their fission by emulsin of sweet almonds, A., II, 178.

Grünler, S., and Gnüchtel, A., emulsin. XXX. Enzymic hydrolysis of 6halohydrin-\beta-d-glueosides and of related compounds, A., II, 399.

and Hiltmann, R., resolution of transcyclopentane-1:2-diol into its optically active components, A., II, 146, 190. Emulsin. XXXI. Mono- and di-β-dglucosides of dihydric alcohols and their hydrolysis by sweet almond emulsin, A., II, 445.

and Peters, O., synthesis of ascorbic acid, A., II, 176.

Hellbach, R., apparatus for heating at controlled temperatures, (P.), B., 1230. Hellbaum, A. A., augmentation of ovarystimulating action of gonadotropic

preparations, A., III, 39.

Hellebrandt, F. A., and Brogdon, E., validity of fractional gastric analysis, A., III, 254.

Helleday, T. See Edin, H.

Heller, A., determining dust deposition in the neighbourhood of works discharging dust, B., 1413.

Heller, H., state in the blood and excretion

by the kidney of the antidiuretic principle of posterior pituitary extracts, A., III, 360.

Heller, Hans, soya-bean oil, B., 586.

Heller, J., micro-respiration vessel for moving organisms, A., III, 447.

Heller, K., and Mayer, A., attempts to discover eka-cæsium, A., I, 269.

Heller, L. W. See Babcock & Wilcox. Heller, M. See Gründer, W. Heller, R. See Deuel, H. J., jun.

Heller, V. G., Jones, M., and Pursell, L., iodine content of Oklahoma vege-

tables, B., 81. and Pursell, L., composition of blood of the hen during its life cycle, A., III,

W., retardation of thixotropic Heller, solidification by amino-acids, A., I, 80. Syncresis, A., I, 133.

See also Centnerszwer, M.

Hellerman, L., and Stock, C. C., metal ion activation in enzymic catalysis; arginase, A., I, 89.

Hellermann, M., high-frequency excitation of a spectrum in the far ultra-violet, A., I, 157.

Hellige, P. A. E., colorimeter, (P.), B., 997.

Hellinckx, L. See Mertens, E.

Helling, W., resistance of aluminiummanganese alloys to chemical and atmospheric attack, B., 145. Hardening of silicon-aluminium alloys, B., 577. Composition of the M.B.V. film [on aluminium] and changes in its properties with increasing time of treatment and on heating and ageing, B., 1223.

and Neunzig, H., coloration of aluminium and its alloys with inorganic materials after M.B.V. treatment, B., 355. Electrodeposition of copper on aluminium after preliminary chemical oxidation, B., 1359. Operation of the M.B.V. process; lacquering treated surfaces of aluminium and its alloys, B., 1371.

Hellman, L. M., Moore, R. A., and Andrus, W. De W., blood-heparin and lipin amino-nitrogen in experimental obstructive jaundice, A., III, 301.

Hellman, V., virial theorem and the theory

of fusion, A., I, 124.
Hellmann, H. See Westphal, U.
Hellriegel, W., fluorotetraborates, oxidotetraborates, and method of preparing boron fluoride, A., I, 320.

Hellstrand, G. A., and George, P. W., milling practice at Buchans mine, Buchans, Newfoundland, B., 48.

Hellström, B., testing cements for large dams, B., 1054.

Hellström, H., relationship between constitution and spectra of porphyrins; [energy] level scheme for the porphyrin molecule, A., I, 61. Mechanism of reduction of cozymase with hyposulphite, A., III, 180.

Adler, Erich, and Euler, H. von, equilibria in dehydrogenase systems, A., III,

and Euler, H. von, observations on chromosomes by dark field illumination and with ultra-violet light, A., III, 234.

See also Adler, Erich, and Euler, H. von. Hellström, N., reactions of the thiol group. IV., A., II, 443.

and Holmberg, B., methylthiolacetic acid and mercuric chloride, A., II, 5.

Hellwege, K. H., screen type of reflexion

grating, A., I, 494.

Hellwig, E., calculation of terms for the ionised hydrogen molecule, A., I,

Helm, D. F., and Mack, E., jun., thermal decomposition of gaseous silicon tetramethyl, A., I, 141.

Helm, E., problems in beers after pasteurisation, B., 967.

Helm, J. See Simek, B. G.

Helmer, O. M., determination of vitamin- B_1 and B_2 in human urine by the ratgrowth method, A., III, 495. See also Fouts, P.J.

Helmholz, L., crystal structure of the lowtemperature modification of thallous

iodide, A., I, 288.

Helstrup, L. K. V., and Dansk Sojakagefabrik A./S., heating, cooling, kneading, and grinding, as well as emulsifying liquid or semi-solid substances, (P.), B., 301.

Heltne, L. P., treatment of dried cassava roots to obtain starch, (P.), B., 1393.

Helz, G. E., and Bosworth, A. W., higher saturated fatty acids of butter fat, A., III. 9.

Hémar, (Mllc.) S., precipitation in the cold of a cupric salt by an alkali carbonate, A., I, 526.

Hemberg, T. See Rnnnström, J. Hemmecke, E. See Fries, K.

Hemmeler, A., and Angelini, (Signa.) M., cobaltinitrites of hexamethylenetetramine, A., II, 524.

Hemmendinger, A., and Smythe, W. R., radioactive isotope of rubidium, A., I, 437.

See also Smythe, W. R.

Hempel, C. H., corrosion and protection of metals in the textile industry, B., 1185.

Hempel, J., and Giese, L., determination of protein in cerebrospinal fluid, A., III,

Hempel, M., and Tillmanns, H. E., pulsating tensile tests on steel at temperatures up to 600°, B., 1214.

See also Körber, F., and Pomp, A.
Hempelmann, L. H. See Preisler, P. W.
Hems, B. A., and Todd, A. R., anthelminties: kousso. I. Protokosin, A., П, 250.

See also Stevens, T. S.

Hencky, K., and Neubert, P., photo-

thermometry, B., 189. Henden, H. H., chemical methods of treating sewage; American practice, B., 397. Hendershot, O. P., absorption factor for the rotating-crystal method of crystal analysis, A., I, 581.

Henderson, C. N. See Ridenour, G. M.Henderson, C. T., [wood pulp for] papermaking, (P.), B., 230.

Henderson, D. W., prophylaxis of experimental V. septique infection; application of antibacterial methods, A., III, 117. Analysis of protective substances in specific sera which control experimental infection with Cl. edematis maligni (Vibrion septique), A., III, 414.

Henderson, G. H., new types of pleochroic haloes, A., I, 483, and Laurence, G. C., range of the a-

particles from thorium, A., I, 489. Mushkat, C. M., and Crawford, D. P., quantitative study of pleochroic haloes. III. Thorium, A., I, 275.

Henderson, H. O. See Landingham, A. H. V.

Henderson, J., natural puzzuolanas in New Zealand, B., 1208.

Henderson, L. F. See Crocker, E. C. Henderson, L. M., and Atlantic Refining Co., hydrocarbon oil treatment, (P.), B., 209. Henderson, M. C. See Henderson, W. J.

Henderson, R. G., effect of nutrients on susceptibility of tobacco plants to downy mildew, B., 1106. Promising fungicides for tobacco downy mildew control, B., 1106.

Henderson, V. E., and Smith, A. H. R., propylene impurities; hexenes and hexanes, A., III, 65. See also Lucas, G. H. W.

Henderson, W. J., and Ridenour, L. N., artificial radioactivity produced by

a-particles, A., I, 490.

Ridenour, L. N., White, M. G., and Henderson, M. C., radioactivity of 38K, A., I, 439.

See also Ellis, C. D., and Ridenour, L.N.

Hendgen, F. See Philippi, E. Hendrey, W. B. See Texas Co.

Hendrick, J., and Moore, W., soil reaction

Hendricks, J., and more, W., son reaction and plant growth, B., 476.

Hendricks, G. See Gruhzit, O. M.

Hendricks, S. B., crystal structure of kaolinite, Al₂O₃,2SiO₂,2H₂O, and the composition of anauxite, A., I, 383. Crystal structures of alunito and the jarosites, A., I, 482.

See also Buerger, M. J., Maxwell, L. R., Rollier, M. A., Wulf, O. R., and Yee,

J. Y.

Hendrickson, A. H. Sce Veihmeyer, F. J. Hendrix, J. P., Westfall, B. B., and Richards, A. N., composition of glomer-ular urine. XIV. Glomerular excretion of inulin in frogs and necturi, A., III, 57.

Hendry, E. B. See Stamp, T. C. Hendry, R. S. Sco Associated Paper Mills. Henelly, T. J., and Yates, E. D., blood-bromine in the psychoses, A., III, 113.

Henesey, F., analysis of indigo vat and reduced indigo products, B., 881. Preparation of isatin by oxidation of indigo, B., 1168.

Henglein, F. A., calcium carbide, B., 1045. and Maul, H., agglomeration of salts of the rock-salt type, B., 902.

and Stoeekhert, K., solution of ferrophosphorus, B., 792.

Henin, S., asymmetry and orientation of clay micelles, A., I, 460. Regeneration of "structural elements" in silt soils, B., 594. Influence of frost on structure of silt soils, B., 702. Mechanism of the spontaneous breakdown of soil aggregates by water, B., 1382.

Hening, J. C., cherry ice cream, B., 612. Comparison of pressure and centrifugal homogenisation of ice-cream mixes, B.,

Henk, H. J., acid-absorption by wool, B., 662. Changes in textile fibres and dyes under the influence of short-wave radiations, B., 896. Silk weighting, B., 898. Artificial fibres from proteins, B., 1032. Rôlo of catalysis in textile chemistry, B., 1194. Significance of capillary chemistry for rayon dyeing, B., 1195. Significance of hydrolysis of soap solutions for the surface tension, B., 1365.

Henke, C. O. See Du Pont de Nemours & Co., E. I.

Henkel, A. A., mixing apparatus, (P.), B.,

Henkel & Co., Ges.m.b.H., surface-active substances, (P.), B., 22. Mortar for plastering, (P.), B., 41. Solvent, softening, and swelling agents, (P.), B., 65. Condensation products and substantially olefine-free oils from olefine-containing oils, (P.), B., 320. Cleansing of metal articles, (P.), B., 455. Hydroarylated aromatic hydroxy-compounds and derivatives thereof, (P.), B., 528. Substitutes for fatty alcohols [alkylcyclohexanols], (P.), B., 529. Capillary-active [wetting]

agents, (P.), B., 662.

Henkel & Co., Ges.m.b.H., washing and cleansing textiles, (P.), B., 662. Treatment of oxidation products of aliphatic hydrocarbons, (P.), B., 877. Anti-freezing agents or compositions, (P.), B., 992. Saponaccous organic sulphides, (P.), B., 1173. Disinfectants, (P.), B., 1282.

Henkels, S. See Dilthey, W. Henley, W. W. See Emmel, M. W. Henley's Telegraph Works Co., Ltd., W. T.,

and Dunsheath, P., melting of metals, (P.), B., 454.

and Evans, B. B., plastic compound applicable to electric insulating purposes, (P.), B., I58.

Henn, W., flow measurement [of water etc.] by vane current meters, B., 1286.

Henne, A. L., fluorinated derivatives of methane, A., II, 362. Fluoroform, A., II, 362.

See also Midgley, T., jun. Henneke, H. Seo Nüssel, H. Hennelly, T.J. See Hawking, F. Hennessy, D.J. See Cerecedo, L.R.Henniger, F. P., measurement of resistance

of boron and of silicon carbide, A., I, 121.

Henning, J. C. See Dahlberg, A. C. Hennion, G. F., self-filling pyknometer, A., I, 635.

See also Bried, E. A., Slanina, S. J., and Vaughn, T. H.

Henny, V. See Universal Oil Products Co. Henrici, M., chemical composition of grass veld, B., 726.

Hemiksen, A. See Lincoln, B. H.

Henrion, J. See D'Or, L. Henry, C. L. See Lee, C. E.

Henry, D. E. See Rentschler, H. C. Henry, F. X., blood reagent for scrumflocculation in malaria, A., III, 172. Henry, J. W. See McJunkin, F. A.

Henry, K. M., and Kon, S. K., milk and nutrition. I. Effect of pasteurisation on the nutritive value of milk. III. Raw and pasteurised milk as sources of calcium and phosphorus for the growing rat. IX. Total nutritive values of raw and pasteurised milks, B., 609.

Kon, S. K., and Watson, M. B., milk and nutrition. V. Effect of pasteurisation on biological value and digestibility of milk protein, B., 609.

See also Campion, J. E., and Gillam, A.E.

Henry, L. See Henry-Cornet, J. Henry, N. F. M. See Tsuru, K.

Henry, N. P. See Lemberg, R. Henry, P., improvement of iron ores, B., 444.

See also Ranque, G.

Henry, R. Sec Camp, H. W.

Henry, T. A., Solomon, W., and Gibbs, E. M., modified cinchona alkaloids. IV. Constitution, A., II, 266.

Henry-Cornet, J., and Henry, L., spectroscopic determination of bilirubin in

serum, A., III, 451.

Hensel, F. R., primary crystallisation of metals, B., 687.

and Mallory & Co., P. R., [copper] alloys [for welding electrodes], (P.), B., 1071. Copper-base alloys [for welding-machine electrodes], (P.), B., 1226.

See also Westinghouse Elec. & Manufg.

Hensel, W. M., colour engraving, (P.), B.,

Henshall, J. H. See Bassett, H. Henson, D. D. See Axe, W. N.

Hentschel, H., eclogite from Gilsberg, Saxony, and its metamorphism, A., I,

Henze, H. R., Hill, A. J., and Cross, L. B., disothiocyanomethyl and di-a-isothiocyanoethyl ethers, A., II, 365. See also Allen, B. B.

Henze, M., behaviour of pyridine and quinoline derivatives when irradiated, A., II, 350. Methiodide of quinoline 1-oxide, A., II, 350.

Henzi, M. See Philippe, E.

Hepburn, D. M., Sadtler, S. S., and Hepburnite Corp., bituminous paving materials, (P.), B., 788.

Hepburn, G. A. See Ripley, L. B. Hepburn, J. S., and Miraglia, P. R., chemistry of turkey eggs, B., 491.

Hepburn, W. M., and Surface Combustion Corp., heat-treating furnace, (P.), B.,

Hepburnite Corporation. Seo Hepburn, D. M.

Hepner, B., and Fajersztejn, S., hydrazine derivatives analogous to barbituric and uric acid, A., II, 308.

Hepp, H. J. See Frey, F. E. Hepplewhite, J. W., effect of zirconium and titanium dioxides on resistance to crazing of a typical glaze for semivitreous dinnerware, B., 345.

Heraeus-Vacuumschmelze Akt.-Ges., magnetic materials adapted to load-transmission lines, (P.), B., 458. Magnetic materials, (P.), B., 932. Making and repairing furnace roofs, (P.), B., 1343.

Herasymenko, P., polarographic studies with the dropping mercury cathode. LXVI. General formulæ for potential of electroreduction of fumaric and maleic

acids, A., I, 311. Herb, R. G., Kerst, D. W., and McKibben, J. L., γ-rays from light elements due to proton bombardment, A., 339.

See also Parkinson, D. B., and Rodine, M.T.

Herbain, M. See Fiessinger, N.

Herbert, D. A., and Lynch, L. J., relative penetrability of various tissues of the orange and banana to ethylene, B., 835.

Herbert, E. G., continuous hardness test [for metals]: periodic hardness fluctu-

ations, B., 1219.

Herbert, F. K., plasma-phosphatase in various kinds of jaundice, A., III, 124.

Herbert, J. See Bary, P. Herbert, J. B. M. See Blumenthal, E. Herbert, W. E., and Thompson, A. R. F.,

gold casting [for dental plates], B., 1222. Herbert, W. S., Herzberg, G., and Mills, G. A., attempt to detect presence of metastable atoms in active nitrogen by

light absorption, A., I, 271 Herbert, Ltd., A., Lloyd, A. H., and Beeny, H. H., hardening of metal [cast-iron]

surfaces, (P.), B., 248.

Herbig, W., lacquering of aluminium and its alloys, B., 1238.

Herbrand, W., test for adrenal cortex hormone and ascorbic acid in guineapigs treated with diphtheria toxin, A., III, 73.

Herbst, H., influence of temperature of heating surface and width of coke oven or thickness of coal layer on time to completion [of coking], B., 514.

Herbst, R. M., reaction between a-ketonic acids and a-aminoacids, A., II, 17. Oxidation of hexosamines: d-glucosamine and d-glucosamic acid, A., II, 327.

Herčík, F., action of ultra-violet light on spores and vegetative forms of B. megatherium sp., A., III, 228.

Hercules Powder Co., and Billing, W. M., cellulose materials from waste cellulose

products, (P.), B., 535. and Borglin, J. N., retarding the crystallisation of rosin, (P.), B., 1241.

Borglin, J. N., and Ott, Emil, sulphurcontaining abietyl compounds, (P.), B., 1025.

and Bowlby, W. D., undercoat for [nitrocellulose] lacquers and lacquered

material, (P.), B., 159. and Butts, D. C., refining of rosin, (P.), B., 469. Hydrogenation of esters of abictic acid, (P.), B., 1241.

and Coburn, H. H., synthetic resin, (P.), B., 1374.

and Crater, W. de C., explosive, (P.), B., 1412.

and Hollabaugh, C. B., [aqueous nitrocellulose] compositions, (P.), B., 1242, 1376.

and Humphrey, I. W., refining of rosin, (P.), B., 1240. and Koch, William, thermoplastic com-

position, (P.), B., 1240. Thermoplastic composition [containing chlorinated rubber], (P.), B., 1240.

and Lister, D. A., refining of rosin, (P.), B., 1241.

and Morrow, D. G., zine sulphide, (P.), B., 909. and Ott, Emil, sulphur-containing ter-

pene compounds, (P.), B., 289. Sulphur-containing abietyl compounds, (P.), B., 1178. Chlorinated rubber composition, (P.), B., 1246.

and Rummelsberg, A. L., sulphonated terpene product, (P.), B., 1178. and Sheffield, D. H., terpincol from pinene, (P.), B., 1025.

and Stern, R. L., wood pulp adapted for chemical use, (P.), B., 128, 537*.

Herd, C. W., standardised test baking, B., 832.

Herd, J. D., nature of paranuclein. II. Comparison of the peptic digestion products of various phosphoproteins. III. Interrelationship of its component fractions, A., III, 375.

Herfeld, H., Commission report of I.V.L.I.C. [Internationalen Vereins der Leder-Industrie-Chemiker] on qualitative tannin analysis 1936-37, B., 1247. See also Stather, F.

Hering, K., necessity for biological evaluation of saponin-containing drugs and procedure for pharmaceutical laboratories, B., 187.

Heritage, C. C., and Oxford Paper Co., control paper, (P.), B., 230.

Herk, A. W. H. van, chemical processes in

Sauromatum bulbs, A., III, 441.

Herkel, W. See Roughton, F. J. W.

Herkenrath, E. See Karrer, P.

Herlitzka, L. See Battistini, S. Herlong, E. S. See Aurelius, J. E. Hermada, milled toilet soaps and im-

proving additions thereto, B., 1365. Herman, H. A., growth and development of dairy calves on a milk diet, A., III,

and Jones, G. D., controlling cattle grubs on dairy cows, B., 826.

Herman, L., absorption of oxygen at the limit of the solar spectrum, A., I,

and Bernstein, (Mlle.) F., relation between variations of intensity of solar ultra-violet radiation, measured at ground level, and pollution of the ground level, and policy lower atmosphere, A., I, 215. treated with aqueous or alcoholic solutions of sodium salicylate, B., 1274.

Hermance, H. W. See Clarke, B. L.

Hermann, A., cement, (P.), B., 41. Hermann, C. E., air separators, (P.), B., 6. Hermann, F., metal content of petrol coke and [heavy oil] ash, B., 11.

Hermann, G., ultra-violet fluorescence of

milk, B., 722.

Hermann, H., eserine and secretion of adrenaline, A., III, 135.

Jourdan, F., Morin, G., and Vial, J., effect of atropine on adrenalinesecretory properties of acetylcholine, A., III, 93. Adrenaline content of adrenal capsules separated from the central nervous system, A., III, 101. Intensification of the adrenalinesecretory action of acetylcholine by eserine, A., III, 135.

Hermann, P., use of cold tar in winter, B.,

Hermann, S., and Neuschul, P., oxidation of glucose by Bacterium gluconicum, Hermann, A., III, 35. Evaluation of calcium gluconate, B., 186.

Hermann, S. F., and Gius, J. A., hyperinsulinism associated with calcified tumour of the pancreas, A., III, 256.

Hermans, J. J., bern effect of ionic mobility; Walden's rule; influence of concentration on electrolytic conductivity, A., I, 64. Diffusion potentials. I. Measurements relating to concentration-elements. II. Maxima and minima in the diffusion of a mixture of electrolytes, A., I, 139. Diffusion of an electrolyte. I. Theoretical. II. Experimental, A., I, 414. and Oosterhoff, L. J., thermodynamical

treatment of diffusion potentials, A.,

I, 520.

Hermans, P. H., and De Leeuw, A. J., deformation mechanism, swelling anisotropy, and fine structure of hydrous cellulose gels, A., I, 515.

Hermanson, J. L. See Coleman, G. H.

Hernegger, F., and Karlik, B., determin-

ation of small quantities of uranium, and uranium content of sea-water, A., I, 99.

Hernler, F., and Pfeningberger, R., electroanalysis with small amounts of substances, A., I, 47. Deposition of small amounts of metal from large volumes of liquid by electrolysis, A., I, 253. See also Philippi, E.

Herold, I., behaviour of perfumes in soaps; nature of fixators; changes in colour and stain formation, B., 462. Odour and chemical constitution: a study for perfumes, B., 1407.

Herold, L. See Anselmino, K. J. Herpen & Vorkauf, Ingenieure. See Vorkauf, H.

Herreng, E. See Lange, J. Herreng, P. See Bloch, L.

Herrick, C. A., Ott, G. L., Halpin, J. G., and Holmes, C. E., excess of calcium in the ration increases susceptibility of chickens to coccidiosis, B., 1404.

Herrick, H. T. See Moyer, A.J., and Wells,

Herriek, J. F. See Soskin, S.

Herrin, R. C., ammonia content, $p_{\rm H}$, and carbon dioxide tension in the intestine of dogs, A., III, 202.

Herring, C., energy bands of crystals; effect of time-reversal symmetry; acci-

dental degeneracy, A., I, 552. Herrington, B. L., and Brereton, J. G., detection of copper in alloys, B., 682.

Herriott, R. M., inactivation of pepsin by iodine and isolation of di-iodotyrosine from iodinated pepsin, A., III, 140.

See also Seastone, C. V. Herrle, K. See Fischer, Hans.

Herrmann, D. B. See Taylor, R. L. Herrmann, E., utilisation of by-products from alumina manufacture, B., 905. Herrmann, Erich, detection of colloidal

cerium oxalate [in drugs], B., 1130. Herrmann, Georges, Decherd, G., Schwab,

E. H., and Erhard, P., creatine content of normal and hypertrophied rabbit's heart after administration of digitalis, A., III, 28.

See also Decherd, G.

Herrmann, Günther, rate of evaporation of

barium oxide, A., I, 294. Herrmann, H., and Perlmann, G., reaction between proteins and metaphosphorio acid, A., II, 529.

See also Fischer, A., and Werle, E.

Herrmann, J. B., and Barbour, H. G., catatonia produced by the introduction of heavy water into the cerebrospinal fluid, A., III, 474.

Herrmann, K. See Thiessen, P. A.
Herrmann, L. A., and Roehner, T. G.,
cutting oils, (P.), B., 1015.

Herrmann, Roland. See Weidenhagen, R. Herrmann, Rudolf, and Sindlinger, F., colorimetric determination of phosphoric acid in seedling tests, B., 1098.

Herrmann, W., improving the quality of coke from difficultly-fusible coals, B., 744.

and Brüggemann, K., improving the quality of coke from semibituminous coals, B., 514.

Herrmann, W. O., and Raap, A. van,

gramophone record, (P.), B., 700. Herrmann, Z., and Slonim, C., ingredients of the Leclanché cell. I., B., 936.

Herschdörfer, Z., and Neave, F. K., comparator for use with Kay and Graham's phosphatase test [for milk], B., 489.

See also Anderson, E. B. Hersey, M. D., heat effects in capillary flow, B., 399.

and Hopkins, R. F., viscosity of lubricants under pressure. I. Fatty oils, B., 1299.

Hershberg, E. B., and Wellwood, G. W., carbon dioxide generator for the micro-Dumas determination of nitrogen, A., I, 429.

See also Fieser, L. F.
Hershberger, A. See Charch, W. H.
Hershberger, A. R., modified Hempel gas

analysis apparatus, A., I, 332.

Hershey, A. D., and Bronfenbrenner, J., dissociation and lactase activity in slow lactose-fermenting bacteria of intestinal origin, A., III, 35. Influence of composition of the medium on metabolism of some slow lactose-fermenting bacteria of intestinal origin, A., III, 274. Factors limiting bacterial growth. I., A., III, 434.

Hershey, A. D., Huddleson, I. F., and Pennell, R. B., separation and bio-logical activity of the polysaccharide constituent in Brucella cells, A., III, 146.

Hershey, R. L., Eberhardt, J. E., and Hottel, H. C., thermodynamic properties of working fluid in internal-combustion engines, B., 109.

Herstad, O., evaporation and knock [of motor fuels], B., 205. Vaporisation and

knock, B., 868. Herthel, E. C., and Sinclair Refining Co., cracking of hydrocarbons, (P.), B., 323. Cracking of [hydrocarbon] oil, (P.), B., 323. Dewaxing hydrocarbon oils, (P.),

Herty, C. H., quality and fitness of [Savannah, Ga.] deep well water for manu-facture of pulp and white paper from slash pine, B., 297.

Herty, C. H., jun., slag-viscosity control for greater uniformity of steel, B., 1211. McBride, D. L., and Hollenback, E. H.,

grain size [in steel], B., 790. Herty, S. D. See Curtis, O. F.

Hertz, R. See Moloney, A. H. Hertz, W., "carbohydrate hormone" of anterior pituitary in blood in glycogen-

storing diseases, A., III, 149.

Hertzog, E. S., rapid analysis of baryte ores containing calcium fluoride, without

the use of fusions, B., 1044. Herviaux. See Vincent.

Herwig, H. See Kliewe, H.

Herz, H., vitaminisation of butter, B., 972. Herzberg, G., Herzfeld, K. F., and Teller, E., heat of sublimation of graphite, A., I, 244.

Patat, F., and Verleger, H., rotation-vibrations in the infra-red of molecules containing the hydrogen isotope of mass 2. II. C₂HD spectrum and the C-C and C-H separations in acetylene, A., I, 9. Photographic infra-red spectrum of methylacetylene (allylene) and the C-C single bond distance, A., I,

Spinks, J. W. T., and Watson, W. W., pressure broadening of the HCN band lines and intermolecular forces, A., I,

Sec also Blum, E., Fox, J. G., Gerö, L., and Herbert, W. S.

Herzen, S., recent theory of catalytic oxidation of gaseous substances at a sufficiently high temperature, A., I, 37. Herzenberg, R., colloidal tin ore deposits,

A., I, 155.

Herzenstein, (Mme.) A. See Cherbuliez, E. Herzfeld, K. F., thermodynamic and kinetic considerations of the vapour-pressure lowering of solutions, A., I, 136. The liquid state, A., I, 446. Second virial coefficient of argon, A., I, 558.

See also Franck, J., and Herzberg, G. Herzmark, N. See Nottelle, L. E.

Herzog, A., examining delustred materials [rayons], B., 662. "Counting chamber" for the microscopical analysis of fibre mixtures, B., 1319.

and Koch, P. A. [with Langer, K., Flunkert, P., and Scheiding, E.], detection and investigation of faults on raw and manufactured textile materials, B., 1319.

and Rückert, H., distinction of viscose and euprammonium rayon, B., 892. Identification of viscose and cuprammonium rayons, B., 1034.

See also Lorant, S.

Herzog, E., causes of electrochemical corrosion of iron and its alloys in moist aërated media, B., 145. Action of dusts and corrosion products of iron in a moist medium, near to neutrality, B., 682. Pickling of ferrous metals B., 1216. See also Chaudron, G., and Portevin, A.

Herzog, F. See Janke, A. Herzog, R. O., Burgeni, A., and Wallwood Corp., leather-like flexible and pliable material from wood sheets, (P.), B., 30.

Herzogenrather Glaswerke Bicheroux & Co. Ges.m.b.H., cooling devices for tempering glass, (P.), B., 346. Tempering of glass, (P.), B., 1342.

Hess, trends in production of special Portland cements, B., 39.

Hess, F. G. See Malisoff, W. M. Hess, F. M., apparatus for determining the consistency of liquids, (P.), B., 997.

Hess, H. H., plagioclase, pyroxene, and olivine variation in the Stillwater [igneous] complex, A., I, 384.

Hess, J. H., Kunstadter, R. H., and Saphir, W., urinary excretion of gonadotropic hormone in cryptorchidism, A., III, 229. Hess, K., highly polymerised natural products, A., III, 82.

and Gundermann, Josef, structure of water envelope of micelles of organic colloids, A., I, 78. Röntgenographic investigations of resting and flowing colloidal solutions; detection of orientation of colloidal particles in flowing through capillaries by occurrence of fibre diagrams; hydration of colloidal particles in solution, A., I, 514. Preparation of homogeneous forms of sodacellulose and their importance for the mechanism of mercerisation. III. Soda-celluloso IV, A., II, 179. Action of liquid ammonia on cellulose fibres; formation of ammonia-cellulose I, ammonia-cellulose II, and cellulose III, A., II, 401.

Hammerstein, H. von, and Gramberg, W., partly methylated disaccharides. I.,

A., II, 276.

and Kinze, L., glucosc 2:3:6-tri-p-toluenc-

sulphonate, A., II, 276.

and Lung, K. H., starch. VIII. Trimethylstarch, A., II, 326.

and Neumann, F., cellulose. LV. The terminal group question and constitution of cellulose, A., II, 232. "Terminal group" method of W. N. Haworth and H. Machemer with polysaccharides, A., II, 232.

and Philippoff, W., dependence of the viscosity of highly polymerised organic compounds on concentration, A., 1, 360. Reversibility of the viscosity of solutions of cellite in acetic acid, A., II, 278. See also Gundermann, Josef, Neumann,

F., Philippoff, W., and Rathje, W.

Hess, R. H. See Swope, H. G. Hess, R. W. See Moses, F. G., and Nat. Aniline & Chem. Co.

Hess, V. F., and Demmelmair, A., worldwide effect in cosmic-ray intensity, as observed during a recent magnetic storm, A., I, 546.

Hess, W. C., and Sullivan, M. X., effect of aldehydes on cystine and cysteine, A.,

II, 530.

See also Sullivan, M.X.

Hesse, C. O., and Schrader, A. L., electrical maturity tester in measuring developmental and ripening changes in the apple, B., 600.

Hesse, G., and Reicheneder, F., calotropin, the African arrow poison. I., A., II,

Hesse, H. See Wolff, Hans.

Hesseltine, H. C., and Noonan, W. J., fungicides. I. Influence of $p_{\rm H}$ on the growth of yeast-like organisms. II. In vitro tests with chemicals on yeastlike organisms and other fungi, A., III,

Hessen, R. B. See Hedberg, C. W. J. Hessenbruch, W., copper-beryllium alloys with high conductivity and hardness, B., 143. Selection of materials for production of heat by electricity, B., 149. Kovar [or fernico] alloy, B., 1216.

Sec also Grunert, A.

Hessenland, M., Kublun, H., and Splitter,

H., resin from trees, (P.), B., 1089. Stephani, G., and Leo, M., properties of pine balsam obtained under stimulating influence of hydrochloric acid, A., II, 26.

Hessenmüller & Wolpert, hardness-testing machines, (P.), B., 1288.
Hessey, R. W. G., effect of an increase in

centrifugal speed on treatment of lowgrade massecuites, B., 1392.

Hessinger, F., procedure for testing [glass-]tank blocks, B., 544.

Hessle, E. T., protein compound of sulphonated hydrocarbon sulphur bodies, (P.), B., 621.

Hessler, L. E., and Gortner, R. A., carbon metabolism of Gibberella saubinetii on glucose, A., III, 316.

Hessler, R., and Kautz, K., arc process for

special welds, B., 561.

Hester, J. B., influence of soil acidity and type on growth and composition of Lima bean plants, B., 168. Interpreting rapid chemical tests for phosphorus in vegetable crops, B., 598. Value of cover crops in potato production in eastern Virginia, B., 709.

and Carolus, R. L., three years' results with the use of copper, manganese, and zinc sulphates in fertiliser mixtures for

potatoes, B., 1251.

and Shelton, F. A., influence of replaceable bases in soil on elemental composition of vegetable crops, B., 169. Influence of acid-neutral fertilisers on vegetable crop production in eastern Virginia, B., 596.

See also Stokes, W. E.

Hetenyi, P., and Solar Manufg. Co., clectrical [electrolytic] condenser, (P.), B., 460.

Hetherington, A. C. See Imperial Chem. Industries.

Hetherington, H. C. See Du Pont de Nemours & Co., E. I. Hettche, H. O., action of salts of fatty acids

on erythrocytes and bacteria, A., III,

and Rosenthal, P., bactericidal properties of essential oils, B., 87.

and Vogel, W., antagonism between B. fluorescens and B. pyocyaneum,

A., III, 145.

Hettel, A. J., drying and disinfecting powder, (P.), B., 1140.

Hetterschij, C. W. G. See De Vries, O. Hettner, G., dispersion and absorption with ultra-short waves; dispersion and absorption of water in infra-red and Debye dipole theory, A., I, 601.

Hetzer, J., fatty acids [produced by action of enzymes and chemicals on oils], B., 256. Evaluation of foaming, wetting, washing, and similar agents; flow time, B., 415. Soft soap in small packages, B., 696. Alkali-free detergents, B., 805. [Fatty acid] distillations and calculations, B., 1367. Fatty acid distillation and yield, B., 1367.

Heubner, W., and Oettel, H., action of organic liquids on the skin, A., III, 63. and Schwedtke, G., formation of methæmoglobin by aniline, A., III, 53.

Heuckeroth, A. W. van, ethylcellulose, B.,

Heuer, H. R. See McGregor, G. H. Heuer, W. W. See Leslie, R. T.

Heukelekian, H., clarification stage of the activated [sewage-] sludge process, B., 191. Factors influencing the clarification of sewage by activated sludge, B., 847.

See also Faber, H.A., and Schulhoff, H.B.Heurn, F. C. van, determination of brittleness of asphalt and asphalt mixtures, B., 555.

Heurtey, C., improvements in sheet[-metal] annealing furnaces, B., 793.

Heuser, G., and Krapohl, E., regulations regarding composition of meat preserves, B., 613. Corrosion of tinned cans by spinach and other preserves treated with

copper compounds, B., 835. Houser, G. F. See Wilgus, H. S., jun. Heuser, II., and United States Process Corp.,

fermented beverages, B., 279.

Heussner, C. E., and Chrysler Corp., corrosion-resistant coating [for zinc], (P.), B., 933. Heuvel, F. A. van den. See Farmer, E. H.

Hevaloid Akt.-Ges., porous metallic products, (P.), B., 1072.

Hevesy, G., von, artificial radioactivity of

scandium, A., I, 5. Discovery of hafnium, A., I, 51.

Linderstrøm-Lang, K., and Nielsen, N., phosphorus exchange in yeast, A., III, 483.

Linderstrøm-Lang, K., and Olsen, C., exchange of phosphorus atoms in plants and seeds, A., III, 106.

and Lundsgaard, E., lecithinamia following the administration of fat, A., III, 42Ĭ.

Hevesy, G. C. See Hahn, L. A. Hewett, C. L., cancer-producing chemical compounds, A., III, 255.

See also Baehmann, W. E.

Hewett, D. F., helvite from the Butte district, Montana, A., I, 482.

and Schaller, W. T., braunite from Mason Co., Texas, A., I, 482.

Hewitt, A. G., and Visking Corp., cellulose articles [seamless tubing], (P.), B., 1193.

Hewitt, L. F., separation of serum-albumin into two fractions. I. II. Nature of the glycoprotein fraction, A., III, 53, 164. Antigenic behaviour of serum-proteins with special reference to crystalbumin and seroglycoid, A., III, 338. Presence of a new serum-protein in the blood of various animals, A., III,

Hewitt, M. L., uses of synthetics in perfumery, B., 619.

Hewitt, R. See Hegner, R. Hewson, E. W. See Bronson, H. L.

Hey, D., cloxanthin, a new carotenoid pigment from the pondweed Elodea canadensis, A., II, 204.

Hey, D. H., and Jackson, E. R. B., nuclear alkylation of aromatic bases. III. Action of methyl alcohol on the hydrochlorides of α - and β -naphthylamine, A., II, 57.

See also Cheetham, K. H.

Hey, M. H., nature and relations of the zeolites, A., I, 270.

See also Bannister, F. A.

Heyd, J., centrifugal separators, B., 988. Heyden, M., fine structure of D_a , A., I, 539.

Heyden Chemical Corporation. See Reynolds, B, M,

Hoydenburg, N. P. See Hafstad, L. R., and Tuve, M. A.

Heydt, sex odour of boar's offal, B., 83. Heyer, R. H., phosphorus in low-carbon,

low-alloy steels, B., 46. Heyes, F. T., routine testing of "dry"

mercerising liquors, B., 336. Heyes, J., photo-electric determination of

copper, A., I, 531.

Heyes, R. G., and Robertson, A., hydroxy-carbonyl compounds. XII. 5:7-Dihydroxycoumarin, A., II, 70.

See also Bridge, W.

Heymann, E., pyrosols, A., I, 302. Heymann, W., carotenæmia in diabetes, A., III, 43. Mode of action and metabolism of vitamin-D, A., III, 46. Metabolism and mode of action of vitamin-D. II. Storage in different tissues in vivo, A., III, 234. Importance of the liver for the antirachitic efficiency of vitamin-D, A., III, 440.

Heymer, G. See Eggert, J.

Heymer & Pilz Akt.-Ges., vertical coke ovens and gas generators, (P.), B., 409.

Heyn, A. N. J., mechanism of cell elongation and properties of cell wall in connexion with elongation. IV. Molecular structure of chitin cell wall of sporangiophores of Phycomyces and its probable bearing on phenomenon of spiral growth, A., III, 223.

See also Bonner, J.

Heyn, F. A., evidence for expulsion of two neutrons from copper and zinc by one fast neutron, A., 1, 5. Radioactivity of cobalt, nickel, copper, and zinc induced by neutrons, A., I, 162. Radioactivity induced by fast neutrons according to the (n, 2n) reaction, A., I, 340.

See also Bouwers, A.

Heyroth, A. H., and Globar Corp., hygrometric apparatus, (P.), B., 635.

Heyrovský, J., theory of overpotential of hydrogen and its catalytic lowering at the dropping mercury cathode, A., I, 466. Polarographic studies with the dropping mercury cathode. LXIX. Hydrogen overpotential in light and heavy water. LXX. Hydrogen overpotential in mixtures of light and heavy water and the separation coefficient, A., I, 525, 567.

and Bures, M., polarographic studies with dropping mercury cathode. LXII. Increase of sensitivity in determination of alkali metals, A., I, 46.

Heywang, B. W., and Titus, H. W., lucerne leaf meal as a source of vitamin-A for growing chickens, A., III, 324.

Heywood, H., numerical definitions of

particle size and shape, B., 299.

Hibbard, A. D., modification of Eckerson's method for determining nitrate reductase, A., III, 96.

Hibbard, P. L., dithizone method for measurement of small amounts of zinc, A., I, 262. Availability of plant nutrients, A., III, 407.

See also Hoagland, D. R.

Hibbard, R. P. See Ewing, D. T. Hibben, J. H., re-emission of visible light and the coloration by ultra-violet light of certain crystals, A., I, 217. Raman spectra of water, aqueous solutions, and ice, A., I, 218. Common ion effect in some aqueous solutions as shown by the Raman effect, A., I, 306. Chemical application of the Raman effect, A., I, 496. Chemical applications of the Raman effect. I. Polymerisation. II. Common ion effect, A., I, 549.

Hibbert, (Mlle.) D., and Duval, C., cobaltic

chloride, A., I, 259.

Hibbert, H., and Steeves, W. H., watersoluble ligninsulphonic acid from an

extracted oak lignin, A., II, 462. and Tomlinson, G. H., jun., vanillin from waste sulphite pulp liquor and related substances containing ligninsulphonic acids, (P.), B., 761.

acids, (R.), B., 101.

Sco also Bell, A., Buckland, I. K.,
Compton, J., Moore, R. G. D., Trister,
S. M., and Wright, G. F.
Hibino, S. See Nishizawa, K.
Hichiri, Y., dielectrics for [electrical]
condensers, B., 360.

Hick, F. K., [determination of] partial pressure of oxygen in arterial blood, A., Ill, 1.

Hickey, F. C., ionisation of acetic acid in aqueous sodium chlorido solutions from 0° to 40°, A., I, 462.

See also Foote, H. W., and Harned, H. S. Hickinbottom, W. J., rearrangement of alkylanihnes. VII. Behaviour of alkylanilines with tert. alkyl groups. VIII. Migration of large groups, A., II, 185,

Hicking, W. N. See Hall, A. J. Hickling, A. See Gross, R. F. J.

Hickman, C. J. See Walton, C. L. Hickman, C. P. See Pennington, J. Hickman, K., identification of vitamins by

molecular distillation, A., III, 43. Hickman, K. C. D., Hecker, J. C., and Embree, N. D., direct determination of

low vapour pressures, A., I, 429. See also Kodak, Ltd.

Hicks, B., shape of the Compton line for helium and molecular hydrogen, A., I,

Hicks, C. S., and Cox, C. I., regulated oxygen transport in two cases of congenital circulatory defect, A., III, 335.

and MacKay, M. E., choline-esterase activity of serum in two cases of myasthenia gravis, A., III, 89.

Hicks, D. See Davies, D. T.

Hicks, E. W., evaporation of water from meat, B., 281. Evaporation of water

from becf, B., 1262.

Hicks, J. F. G., jun. See Blue, R. W., and Keyes, F. G.

Hicks, (Sir) M., Heath, A. R. N., and Tapp,

T. C., coating of metal electrolytically, (P.), B., 1072.

Hicks, V., what X-rays can do for industry, A., I, 117.

McElroy, O., and Warga, M. E., quartz in industrial dusts and deposits on human lung tissues; X-ray diffraction, chemical and spectrographic studies, A., III,

See also Hull, R. B., and Sidhu, S. S.

Hickson, E. F., properties and tests of traffic or zone paints, B., 699.

Hidnert, P., thermal expansion of leadantimony alloys, A., I, 127. Thermal expansion of cemented tungsten carbide, B., 450.

Hieber, W., metal carbonyls, A., I, 422. and Schulten, H., metal carbonyls. XXV. Preparation and properties of free cobalt carbonyl hydride, A., I, 322.

and Schulten, H. [with Ehmann, E. A.], metal carbonyls. XXIV. Mode of formation and metallic salt reactions of cobalt carbonyl hydride, A., I, 322.

nd Spacu, P., metallic carbonyls, XXVI. Action of organic sulphur compounds on carbonyls of iron and cobalt, A., I, 577.

Hiedemann, E., new results of investigations on supersonic waves, A., I, 404. and Hoesch, K. H., optical examination of supersonic wave fields in liquids and glasses, A., I, 70. See also Brandt, O.

Hiers, G. O., corrosion-resistant lead equipment, B., 145. Metals and alloys from lead, zinc, tin, and antimony, B., 575. and Collins & Aikman Corp., sponge rubber, (P.), B., 161. Coating [with rubber latex], (P.), B., 592. Higasi, K., dipole moment and solvent.

II. Electric moment of some amines. III. Electric moment of dissopropyl

ketone, A., I, 347. and Kubo, M., dielectric constant of cetyl alcohol near its m.p., A., I, 445

Higginbottom, A., Hill, P., and Short, W. F., synthesis in the phonanthrene series. V. 4-Methoxy-1-methylphenanthrene, A., II, 145.

Higginbottem, H. B., and Stein & Atkinson, Ltd., mechanical feed means, particu-larly for gas-producing apparatus, (P.), B., 997.

Higgins, F.M. See Nat. Aniline & Chem. Co. Higgins, G.M. See Lemon, W.S.

Higgins, J. C., and Pollard, A. G., determination of carbon disulphide, especially in soil, B., 522.

Higgins, O. A., and Humphreys Coal & Coke Co., coking of coal, (P.), B., 1300.

Higgins, S. See Swan, H. Higginson, IV. A. See Cummins, J. E.

Higgs, E., dyeing and finishing characteristics of Bemberg [cuprammonium rayon yarn], B., 1039.

High Duty Alloys, Ltd. See Day, L. G. Highland Iron & Steel Co. See Schlossberg, J. B.

Highman, W. J., jun., and Hamilton, B., calcium and phosphorus metabolism in intractable rickets, A., III, 206. See also Hamilton, B.

Hignett, H. W. G., non-ferrous welding, B., 452.

Hignett, T. P. See Royster, P. H.

Higounet, H., influence of anti-coagulants on partition of chloride ions between plasma and corpuscles, A., III, 291. A synthetic anti-coagulating, anti-fer-menting substance [for blood], A., III, 292. Use of polymerised anetholedisulphonate as an anti-coagulant in determination of alkaline reserve of bloodplasma, A., III, 337. Hijman, A. J., determination of lead in

organs, bones, and sera, A., III, 52. and Veen, A. G. van, djengkolic acid, a new amino-acid containing sulphur,

A., II, 139.

Hilbert, G. E., synthetic nucleosides; 1-glycosidouracils, A., II, 166.

and Rist, C. E., synthesis of 1-d-ribosidouracil; interaction of acetobromo-dribose and 2:4-diethoxypyrimidine, A., II, 213.

See also Howard, L. B., and Pinck, L. A.

Hild, K. See Wever, F.

Hildebrand, J. H., intermolecular forces in solutions, A., I, 135. Validity of Raoult's law for paraffin molecules of

very different length, A., I, 356. and Negishi, G. R., solubility. XV. Solubility of liquid and solid stannic iodide in silicon tetrachloride, A., I, 178.

Hildebrandt, H. See Bauer, K. H.

Hilditch, T. P., source of typical components of milk fats; hypothesis suggested by recent work on their glyceride structure, A., III, 297. Lessknown constituents of milk and their examination; some minor component acids of milk fats and their possible significance, B., 611.

and Longenecker, H. E., component acids of ox depôt fat; minor constituents, A., IlÎ, 415.

and Paul, Harry, depôt fat of Varanus

salvator (Ceylon), A., III, 119. and Pedelty, W. H., component fatty acids of the phosphatides of soya bean

and rape seeds, A., III, 503. and Shorland, F. B., composition of the liver-fats of some New Zealand farm

animals, A., III, 374.
and Terleski, J. T., component acids
and glycerides of partly-hydrogenated marine animal oils. II. Antarctic whale oil, B., 1234. See also Green, T. G., and Harper, D. A.

Hildorf, W. G., White, A. E., Clark, C. L., and Timken Roller Bearing Co., alloy steels and articles made therefrom, (P.), B., 147.

Hildreth, A. C. See Chandler, W. H. Hileman, J. L. See Curtis, L. R., and Webb, R. E.

Hiles, J., and Mott, R. A., determination of the real sp. gr. of coke, B., 405.

Hiley, J. See Dawsey, L. H., and Lathrop, F. H.

Hilgenstock, P., ten years of pitch carbonisation, B., 1152.

Hilke, O., influence of various substituents, and their position, on the Kerr effect. I. Purification of nitrobenzene; influence of clectrode materials on conductivity, etc. II. Effect of positive and negative groups in p-position on magnitude of the Kerr effect. III. Frequency dependence of ϵ of nitrobenzene, and discussion of the theory of the Kerr effect, A., I, 13.

Hilkenbaumer, F., prevention of delayed germination in stone-fruit seeds, B., 1386. Hilker, L. D. See Whitaker, R.

Hill, A. G., and DuBridge, L. A., energy distribution of photoelectrons from sodium, A., I, 541.

Hill, A. J. See Henze, H. R., and Speer,

Hill, A. S. G., photo-electric smoke penetrometer, B., 1363.

Hill, A. V., and Angell, H. R., downy mildew (blue mould) of tobacco; prevention of development in inoculated and infected seedlings by benzene, B., 274.

Hill, (Sir) A. W. See Metcalfe, L. R.

Hill, C. K., drive screws, (P.), B., 690. Hill, D. W. See Callow, H. I., and Harford, A. D.

Hill, E. L., virial theorem in nuclear problems, A., I, 214. Virial theorem, A., I, 391.

See also Williams, John H.

Hill, E. S., two-step oxidation-reduction of phthiocol, A., I, 246.

Hill, F., miscellaneous applications of dyes, B., 897.

Hill, Frederic. See Powel & Hill, Ltd.

Hill, F. B. See Brit. Celanese. Hill, F. C. See Wilhelmj, C. M.

Hill, G. R. See Thomas, M. D.

Hill, II., functional disorders of apples on the tree, B., 824.

Hill, J. B., and Gray Processes Corp., refining of mineral oil distillates, (P.), B.,

Hill, J. R., and Weber, C. G., stability of motion-picture films as determined by accelerated ageing, B., 394. Evaluation of motion-picture film for permanent records, B., 1274.

Sce also Weber, C. G. Hill, L. See Eisenlohr, F.

Hill, (Sir) L., rationale of certain methods used in physical treatment, A., III,

Hill, M.L. See Ayres, E. Hill, N.G. See Abbasy, M.A. Hiller, N.H., McCabe, E.B., and Worthington Pump & Machinery Corp., continuous filter, (P.), B., 994.

Hill, P., and Short, W. F., syntheses in the phenanthrene series. IV. 1-Methoxy-2-methylphenanthrene and the preparation of substituted phenylacetic

acids, A., II, 150. Short, W. F., and Stromberg, H., syntheses in the phenanthrene series. VII. 5:9-Dimethoxy- and 5-methoxy-

1-methylphenanthrene, A., II, 337. Short, W. F., Stromberg, H., and Wiles, A. E., syntheses in the phenanthrene VI. 3-Methoxy-1-methylseries. phenanthrene, A., II, 240.

See also Higginbottom, A. Hill, R., oxygen evolved by isolated chloroplasts, A., III, 285.

and Richter, D., anthraquinone colouring matters: galiosin; rubiadin primveroside, A., II, 87. Anthraquinone pigments in *Galium*, A., III, 107.

Hill, R. D., absorption coefficients for aluminium, copper, and silver in the X-ray region from 13 to 24 A, A., I, 541.

See also Burhop, E. H. S. Hill, R. M. See Longwell, B. B., and Roughton, F. J. W.

Hill, R. T. See Strong, L. C. Hill, S. G. See Griffith, R. H. Hill, W. C. O., blood-groups of Veddahs, A., III, 453.

Hille, E. See Alten, F.

Hillemann, H., sterol hydrocarbon, C₁₈H₁₈, and two isomerides thereof, A., II, 56. Molecular asymmetry, A., II, 315.

Hiller, A. See Van Slyke, D. \hat{D} .

Hiller, C., comparative studies with various brown coals, and effect of particle composition, tension of water content, ash content, and bulk density on compressibility, B., 7.

Hillhouse, C. B., and Hillhouse, S. R., gas, (P.), B., 318. Hillhouse, S. R. See Hillhouse, C. B.

Hillig, F., colorimetric determination of lactic acid in milk and milk products, B., 489. Colorimetric determination of lactic acid in tomato products, B., 974. Hillman, B. S., soda prints on pile fabrics,

B., 432. Hillman, E. S., and Barnett, B., constitution of cracked and uncracked asphalts,

B., 1003.

Hillman, W. O'B. See Lewis, R. H. Hills, B. M. See Howles, F.

Hills, Ltd. See Royles, Ltd.

Hillson, S. P. See Chalkin, F. C.

Hilly, G. See Paul, R.

Hillyer, J. C., determination of the common and rare alkalis, A., I, 375.

Hilpert, R. S., chitin in micro-organisms, A., III, 315.

Becker, D., and Rossée, W., lichens, fungi and algæ, A., III, 160.

Friesen, G., and Rossée, W., influence of medium on the chemical composition of Aspergillus niger, A., III, 143.

Littmann, E., and Weinbeck, R., mercuriation of wood, straw, and lignin; evidence against the presence of aromatic components, A., II, 205.

and Oelmann, A., straw xylan, B., 225. and Peters, O., alkaline degradation of pine wood. I. and II., A., II, 110, 205. Benzylated pine wood, A., II, 110.

and Schacht, R. [with Hoffmann, A.], isomerism and allotropy of oxides of iron; ferromagnetic basic iron

chlorides, A., I, 421. and Woo, Q. S., "cuproxam" lignins; action of Schweitzer's reagent on wood and other components of plants, A., 11, 204,

See also Rippel, A.

Hilsch, R., diffusion and reaction of hydrogen in potassium bromide crystals, A., I, 407. Alkali halide phosphors containing heavy metals, A., I, 550.

Hiltmann, R. See Helferich, B.

Hiltner, W., determination of traces of copper and manganese in fabrics, B., 1319.

Hilton, J. H. See Hague, S. M., and Loy, W. O.

Himemoto, T. See Katagiri, H.

Himmelsbach, H., beverage from whey, (P.), B., 495.

Himmelweit, F., fluorescence microscopy on living virus with oblique incident illumination, A., III, 398.

Himsworth, F. R. See Imperial Chem. Industries.

Himsworth, H. P., diet and incidence of diabetes mellitus, A., III, 171. Diet of diabetics prior to onset of disease, A., III, 171. Dietetic factor determining glucose toleranco and sensitivity insulin in healthy men, A., III, 186. Himsworth, R. W. See Imperial Chem.

Industries.

Himwich, H. E., Bowman, K. M., Wortis, J., and Fazikas, J. F., brain metabolism during the hypoglycæmic treatment of schizophrenia, A., III, 463.

See also Dolowitz, D., Fazikas, J. F., and Goldfarb, W.

Hind, H. L., Pasteur to 1936-development of science in brewing, B., 718.

Hinde, J., heat insulation [methods for food industries], B., 627.

Hinde & Dauch Paper Co. See Drewsen, P. Hindenburg, K. G. See Waldmann, H. Hindermann, P. See Ruggli, P.

Hindle, T., and Lord, S., [joints for] papermakers' dryer felts, (P.), B., 1194. Hinegardner, W. S. See Du Pont de Nemours & Co., E. I.

Hines, H. M. See Wood, E. L.

Hines, P. R., de-inking of paper printed with oxidisable inks, (P.), B., 431.

Hinglais, H. See Brindeau, A. Hinglais, M. See Brindeau, A. Hinkel, E. T. See Condo, F. E.

Hinkel, L. E., Ayling, E. E., and Beynon, J. H., hydrogen eyanide_synthesis of aromatic aldehydes. I. Dibenzfuran-3-aldehyde, A., II, 299.

Richards, G. O., and Thomas, O., hydrogen cyanide. X. The tetrapolymeride, A., II, 433.

Hinko, T., essential oils, B., 497. Fat mixtures for cooking fats, B., 1077.

Hinonisi, S. See Kobayashi, K. Hinrichsen, O., bright electrodeposits of nickel-cobalt alloys, (P.), B., 693.

Hinsberg, K., determination of hydroxyl value of hydroxy-fatty acids, A., II, 133. Stabilisation of ascorbic acid by metaphosphoric acid, A., II, 228.

and Ammon, R., autoxidation of linoleic and linolenic acid in buffered solution in presence of porphyrins, A., II, 175. Detection of ascorbic acid in urine by means of 2:4-dinitrophenylhydrazine, A., III, 46.

and Gockel, H., colorimetric microdetermination of copper in human liver by means of cryogenin, A., III, 86.

and Kiese, M., determination of small amounts of arsenic in biological material, A., III, 288.

See also Ammon, R.

Hinsberg, O., β-phenyl sulphide. III. and IV., A., II, 288, 450.
Hinshelwood, C. N., transition state method

in chemical kinetics, A., I, 312.
See also Fairclough, R. A., Mitchell,
J. W., and Staveley, L. A. K.

Hinsie, L. E. See Brand, E.

Hintenberger, H. See Klemenc, A.

Hinz, G. See Meerwein, H.

Hinzmann, R., light-metal bearing alloys,

Hippel, A. von, spectroscopy of ionic crystals and its application to alkali halides, A., I, 8.

Hipple, J. A., jun., and Bleakney, W., perfect e/m filter as a mass spectrograph, A., I, 582.

Hiraiwa, M. See Asahina, Y. Hirakawa, K. See Tanaka, J.

Hirao, S., constituents of kaoliang, A., III, 287.

Hiraoka, S. See Nishizawa, K.

Hiraoka, Y., influence of acridine derivatives on the blood picture: relation to sterilising action, A., III, 426.

Hirashima, K., influence of mercury on cultivated tissue. IV. Mercury exhibits a cumulative action on cultures of fibroblast in vitro. V. Secondary effects, A., III, 22. Influence of strychnine on growth and on histological picture of cultures of fibroblast in vitro: cumulative action of the drug, A., III, 28.

Hirata, F., rigidity and constitution of a thermo-reversible gel, A., I, 515.

Hirata, K. See Nisikado, Y. Hird, B., coal dust in moulding sands, B.,

Hiriman, W. M., and Frederick Post Co.,

accelerated diazo-printing, (P.), B., 91. Hirone, T. See Honda, K.

Hirose, Y., antigenic property of quinine hydrochloride, A., III, 116.

Hirsch, A. See Elledge, H. G. Hirsch, E. F., radial inclusions of giant cells, A., III, 415.

Hirsch, G. C., and Pelt, R. F. J. van, cyclic variation of liver-glycogen of the white mouse, determined by the number-

of stages method, A., III, 305.

Hirsch, J., detection of factors which influence the multiplication of aërobic micro-organisms, A., III, 434. Hirsch, P., pectin, (P.), B., 979. Hirschberg, E. V. See Amitin, B. Z.

Hirscher, $H_{\cdot \cdot}$, sensitivity to γ -rays of proteins and their constituent compounds, A., IlI, 8.

Hirschfelder, A. D., and Haury, V. G., plasma magnesium and potassium in

epilepsy, A., III, 58. Hirschfelder, J., Diamond, H., and Eyring, H_{**} , calculation of the energy of H_{3} and H₃+. III., A., I, 551.

See also Eyring, H. Hirschfelder, J. O., and Kincaid, J. F.,

application of the virial theorem to approximate molecular and metallic cigenfunctions, A., I, 595.

Hirschhorn, L., acetylsalicylic acid solution, (P.), B., 1270.

Hirschkind, W., Bender, H., and Great Western Electro-Chem. Co., xanthates, (P.), B., 21.

and Great Western Electro-Chem. Co., bleaching process and bleach, (P.), B., 1041.

Hirschlaff, E., optical reflectivity of metals in the superconducting state, A., I, 228. and Norrish, R. G. W., primary photochemical processes. IX. Decomposition of nitromethane and nitroethane, A., I, 39.

Hirschler, A. E., vapour pressures of saturated solutions, A., I, 136.

Hirschmann, H. See Wintersteiner, O. Hirschmann, O., [apparatus for] preservation of meat [by injection of brine etc.], (P.), B., 1266.

Hirschmann, W. B. See Bechtner, P. Hirschmüller, H., photoelectric colorimeter for sugar work, B., 1393.

See also Landt, E.

Hirsh, B. W. See Imperial Chem. Industries.

Hirsh, F. R., jun., search for element 87, A., I, 274.

Hirshfield, C. F., rubber cushioning devices, B., 1244.

Hirst, C. T. See Greaves, J. E. Hirst, E. L. See Harris, T. L., and Haworth, W. N.

Hirst, F., and Adam, W. B., canning trials of green pea varieties; 1925—35, B., 492.

Hirst, H. R., analytical methods used for identification of dyeing faults, B., 661. and King, P. E., effect of dyeing on strength and spinning properties of wool, B., 896.

Hirst, L. L., and Pinkel, I. I., absorption of carbon dioxide by amines; di- and tri-ethanolamine and tetramine; [purification of hydrogen], B., 35.

Hirwe, N. W., and Gavanker, (Miss) K. D., derivatives of salicylic acid. XII., A., Π , 340.

and Patil, B. V., derivatives of salicyclic acid. XI. Bromosalicylic acids and their methyl ethers, A., II, 340. Sce also Jadhav, G. V.

Hisatsune, C., constitution of alloys of copper, aluminium, and silicon. I. Equilibrium diagrams of three binary systems, A., I, 177.

Hisaw, F. L., Fevold, H. L., and Wisconsin Alumni Res. Found., isolation and purification of hormones, (P.), B., 88. Isolation and purification of the gonad-stimulating hormone, (P.), B.,.

See also Fevold, H. L., and Leonard. S. L.

Hiscox, E. R., pigment-producing organism (Pseudomonus sp.) isolated from discoloured butter, B., 180.

Hisey, A. See Morrison, D. B. Hishiyama, K., mordanting silk with chromium salts. VII. and VIII., B., 772.

Hitch, E. F. See Du Pont de Nemours & Co., E. I.

Hitchcock, A. E. Sec Zimmerman, P. W. Hitchcock, D. I., a standardisation of the $p_{\rm II}$ scale, A., I, 568.

and Taylor, (Miss) A. C., standardisation of hydrogen ion determination. I. Hydrogen electrode measurements with liquid junction, A., I, 620.

Hitchcock, F. A. See Thorn, G. W. Hitchcock, J. O., use of nickel in non-

ferrous alloy castings, B., 922.

Hitchcock, L. B., mechanism of gas-liquid reaction; batch absorption of carbon dioxide by stirred alkaline solutions, B.,

Hitchens, R. See Ferguson, A. L.

Hitchens, R. M., analysis of glycerophosphates. I. Ferric and manganese gly-

cerophosphates, B., 285. and McCauley, M. S., analysis of glycero-phosphates. II. Determination of small amounts of orthophosphates in glycerophosphates, B., 285.

Hite, C. E., emulsifiable asphalt, (P.), B., 1159.

Hitzbleck, E. See Benrath, A. Hixon, R. M. See Salathiel, R., and Whistler, R. L.

Hixson, A. W., and Leudeke, V. D., wall friction on liquid agitation systems, B., 1286.

and Tenney, A. H., quantitative evaluation of mixing, B., 1142.

Hiyama, S. See Ishida, Y.

Hjärre, A., and Berthelsen, H., method for fixing neutral-red in supra-vital stained blood smears, A., III, 335. Hjerpe, E. B., Gruse, W. A., and Gulf Oil

Corp., treatment of petroleum oils, (P.), B., 1014.

Gruse, W. A., and Gulf Research & Development Co., treatment of petroleum oils, (P.), B., 873. Refining of petroleum oils, (P.), B., 1164.

Hjort, A. M., De Beer, E. J., Buck, J. S.,

Ide, W. S., and Fassett, D. W., relative hypnotic effects of some carbamides: of varied types, A., II, 491.

Fassett, D. W., and De Beer, E. J., anæsthetic effects of some N-arylbarbituric acids containing dye-forming groups, A., III, 477.

See also Buck, J. S.

Hjulstad, A. See Berner, E.

Hladik, J., determination of crude fibre in oil-bearing seeds and their press residues, B., 585.

Hiasko, M., differences between conductivity coefficients of strong electrolytes: in the same solvent, A., I, 244.

Hlučka, F., optical behaviour of fuchsin in polarised light, A., I, 19. Selective reflexion of silver and zinc in polarised light and its relation to the selective photo-electric effect, A., I, 19. Photoelectric and other optical measurements with silver, zinc, and fuchsin, A., I, 221.

Hlynka, I. See Hunter, G. Ho, T. S. See Tseng, C. L. Hoag, J. B., and Smith, N. M., jun., thyratron-controlled ionisation gauge, A., I, 100.

Hoagland, D. R., and Broyer, T. C., salt accumulation by [plant] roots, A., III, 105.

Chandler, W. H., and Hibbard, P. L., little-leaf or rosette of fruit trees. Effect of zinc on growth of various plants in controlled soil- and water-

culture experiments, B., 603.

Hoagland, H., "master reactions" and temperature characteristics, A., III, 479. Hoagland, R., and Snider, G. C., nutritive

value of protein in calf lungs, cow udders, and hog spleens, B., 83. Hoak, C. B., annealing furnaces, (P.), B.,

356.

Hoar, T. P., corrosion of tin in nearly neutral solutions, A., I, 576. Colorimetric determination of copper with diethyklithiocarbamate presence of moderate amounts of iron, A., I, 580. Statistical correlation and metallurgical problems, B., 47. Pick-

ling of steel, B., 1213.
See also Jackson, C. J.
Hoare, F. E., and Brindley, G. W., diamagnetic susceptibilities of salts forming ions with inert gas configurations. III. Alkaline-earth halides and general discussion, A., I, 451. Diamagnetic susceptibilities of dissolved and hydrated salts, A., I, 563.

Sec also Brindley, G. W.

Hoare, W. E., decoration of tinplate by printing and varnishing, B., 924. Variation in thickness of the tin coating of tinplate, and its effect on porosity, B., 1065.

and Chalmers, B., estimation of thickness of tin coatings on steel by a

magnetic method, B., 1061.

Hobart, F. A. See Drew, H. D. K. Hobart Manufacturing Co., and Jensen, D. G., devices for sifting finely-divided material such as flour, (P.), B., 510.

Hobbs, B. C. See Ashley, J. N. Hobech, W. H. See Robertson, D. W. Hobrock, R. H., resistance elements, (P.), B., 1364.

See also Western Electric Co.

Hobson, E. N. See Raynor Optical Co. Hobson, R. P., sheep blow-fly. III. Chemotropism of Lucilia sericata, Mg. IV. Chemistry of the fleece with reference to the susceptibility of sheep to blow-fly attack, A., III, 264. See also Davies, W. M.

Hocart, R., structural scheme of proustite

and pyrargyrite, A., I, 587. and Fallot, M., structure and magnetic properties of manganese boride, MnB, A., I, 67. Identification of different phases in iron-palladium alloys by magnetic and X-ray methods, A., I, 357.

Hoch, J., action of organo-magnesium compounds on ketoximes, A., II, 22. Action of organo-magnesium compounds on trialkylacetophenoneoximes, A., II, 153.

Hock, J., substances with a female hormone effect; synthesis of 4:5-benzo-6:7:8:9 - tetrahydroacenaphthen-2-one, A., II, 423.

See also Ramart-Lucas, (Mme.) P.

Hochberg, B. M., and Kvascha, O. G., thermo-electric processes in cuprous oxide, A., I, 11.

Hochberg, S., and LaMer, V. K., micro-determination of density by the fallingdrop method, A., I, 429.

Hoche, A., esterification process [for cellulose], (P.), B., 895.

Hochstein, J. P., determination of lead, A., I, 476.

See also Alexandrov, G. P.

Hochstetter, F. W., [composition for] coloured and flameproofed [cellulosic] material, (P.), B., 1332. Hochstrasser, J. Sec Rollett, A.

Hochwald, A., anaphylactic shock and vitamin-C, A., III, 77.

Hochwald, F., preventing or reducing the development of gases in charging cells

or accumulators, (P.), B., 362. Hochwalt, C. A., Carmody, W. H., and Talbott, N. S., ageing of whisky, (P.),

Reboulet, H. J., and Mead Res. Eng. Co., coating process and coated [metal] article, (P.), B., 1073.

and Monsanto Petroleum Chemicals, prepared resin [from unsaturated hydrocarbons], (P.), B., 262.

See also Mead Corp., and Thomas, C. A. Hock, A., colour intensity and colour values as characteristics of the form and type of soil humus, B., 593. Characterisation of humus in soil, B., 1384.

Hock, H., autoxidation of simple hydrocarbons as a contribution to knowledge of the autoxidation of fuels and

lubricants, B., 1006. and Schrader, O., determination of organic peroxides, especially in motor fuels, B., 206. Properties of carbonised products from brown-coal briquettes in comparison with those of coke from bituminous coal, B., 312.

Schrader, O., and Mühlhausen, C., briquette research. IV. Comparative physical and chemical properties of different brown-coal deposits from viewpoint of briquetting properties, B., 102.

Hockenyos, G. L., mechanism of absorption of pyrethrum powder by roaches, B., 624.

Hodapp, E. L. See Luyet, B. J. Hodgdon, R. E. Sec Lacount, R. G. Hodge, A. H. See Hubbard, J. C. Hodge, H. C., lipins of tooth pulp, A., III,

See also Le Fèvre, M.L.Hodge, H.M. See Sherman, J.M.

Hodge, J. C., radiography in the welding shop, B., 801.

Hodge, W. W., pollution of streams by coal-mine drainage, B., 1282.

Hodges, J. M. See Manlove, Alliott & Co. Hodgson, H. H., tautomerism of benzoquinoneoxime-p-nitrosophenol tems, A., II, 251.

and Crook, J. H., preparation of the 3-halogeno-4-nitrophenols, A., II, 14. Nitration of phthalonaphthylimides and facile preparation of 8-nitro-anaphthylamine, A., II, 57. Synthesis of 8:8'-dinitro-1:1'-dinaphthyl and related compounds, A., II, 237.

Hodgson, H. H., and Elliott, R. L., elimination of halogen during nitration of halogenonaphthylamines, A., II, 57. Application of Ullmann's reaction to the preparation of dinaphthyls, A., II, 93.

and Holt, P. F., diphenyl series. IV. Preparation and properties of substituted diaminodiphenyls, A., II, 189. Constitution and affinity for cotton of disazo-dyes from substituted diaminodiphenyls, B., 896.

and Leigh, E., reactions of sodium monoand di-sulphides with 1-chloro-2nitro-, 2-chloro-1-nitro-, and 1-chloro-4-nitro-naphthalene, A., II, 414.

and Marsden, E., reaction between aniline

and iodine, A., II, 408. and Smith, E. W., iodination of 3-hydroxy- and of nitrated 3-hydroxybenzaldehydes, and nitration of certain iodo-3-hydroxybenzaldehydes, A., II, 102. Identification of naphthol vellow S and a suggested mechanism of its fading, B., 762.

and Smith, R., compounds of phenyl p-nitrophenyl sulphide and ether with sulphuric acid; example of thio-

quinonoid formation, A., II, 495. Hodgson, J. N. See Riddet, W.

Hodgson, R. E., and Knott, J. C., composition and apparent digestibility of the flat pea (Lathyrus silvester), B., 1125.

See also Knott, J. C.

Hodnett, L. See Seyer, W. F. Hodsman, H. J., treatment of tars, fuel oils, and bitumens, (P.), B., 1301. See also Clark, A. A., and Lister,

A.

Hodson, A. Z. See Salisbury, G. W. Hodson, W. D., lubrication and lubricant therefor, (P.), B., 18.
Höber, R. See Laug, E. P.

Hoecker, F. E., effect of carbon disulphide as solvent on electric moment of solvent, A., I, 355.

Höfer, A. See Spengler, O. Höfer, H. See Klemene, A.

Höfer, P., magnesium and calcium chlorides as dust preventives, B., 503. See also D'Ans, J.

Höfinghoff, W. See Ostermann, W. Hoefiake, J. M. A., and Korvezee, A. E.,

emanation formation in radium drinkingvessels, B., 192.

Höfler, K., differences in permeability in different tissues of one plant and their presumed chemical origin, A., Ill, 234.

Högn, V. See Friese, H. Hoehn, W. N. See Mason, H. L.

Höhne, H. See Leuchs, H.
Hoehne, K. See Meyer, Julius.
Hoek, C. P. van, photomicrographical
"evidence" for the "soap-formation theory," B., 811. Hökl, J. See Lenfeld, J.

Hoekstra, J. See Nachtsheim, H. Hölemann, P., and Braun, A., adsorption

of molecular and atomic iodine on quartz glass, A., I, 75.

and Clusius, K., electrolysis of deutero-fatty acids. I. Electrolysis of deuter-acetic acid. II. Formation of ethylene during electrolysis of propionic acid, A., II, 226, 227.

See also Braun, A. Höltje, R., and Schlegel, H., analysis of poor tin ores, B., 570.

Hölzl, F., ternary system K₂O-SO₂-H₂O, A., I, 363. Course of complex reactions in analogous systems, A., I, 373.

Hönel, H., and Beck, Koller & Co., condensation products, (P.), B., 946. See also Beck, Koller & Co. (England)

Ltd.

Hönig, F., crushing experiments on cement mortar and [clay] bricks, B., 786. Fundamental laws of crushing and grinding, B., 852. See also Bierbrauer, E.

Hönigschmid, O., at. wt. of neodymium, A., I, 592. At. wt. of phosphorus, A., I, 592.

and Wittner, F., at. wt. of erbium. II., A., 1, 274.

Sec also Baxter, G. P.

Hönl, H., theory of charged elementary particles, A., 1, 278.

Höppner, K., [boiler-]inerustation removal with trisodium phosphate, B., 1285. Hoerburger, W. See Fink, H.

Hørlück, A. D., fineness analysis of bronze

powders, B., 1353.

Hoerr, N. L., histological studies on lipins. I. Osmie acid as a microchemical reagent with special reference to lipins. II. Cytological analysis of the liposomes in the adrenal cortex of the guinea-pig, A., III, 198. Altmann-Gersh and freezing-drying method. II. Mechanism of secretion of hydrochloric acid in the gastric mucosa, A., III, 198.

Hoesch, K. H. See Hiedemann, E. Höschen, W. See Dilthey, W.

Höss, O. See Dane, (Frl.) E.

Hoeven, H. W. van der, flammability of propane-air mixtures; range at low pressures, A., I, 312.

Hofer, A. W., inspection of commercial

legume inoculants [for soils], B., 74.

Hofer, E., compounds of amino-acids with organic (especially fatty) acids. II. Amino-acids or peptides and the higher fatty acids, A., II, 8. See also Przylecki, S. J. von.

Hofer, J. W. See Stern, K. G.

Hofer, K., rapid chemical water-purification processes, B., 1281.

Hoff, C. von, respiratory appliances, (P.), B., 1282.

Hoff, C. M., zinc-plating, B., 356.

Hoffer, M., determination of polonium content from salts in thick layers, A., I,

Hoffman, C., Schweitzer, T. R., and Dalby, G., control of rope in bread, B.,

and Ward Baking Co., manufacture of cereal products, (P.), B., 838.

Hoffman, E. See Jenkner, A. Hoffman, E. J., and Bradshaw, M. A., losses of organic substance in spontancous heating of lucerne hay, B., 615.

See also Ralston, A. W.

Hoffman, I. C., influence of ammonia- and nitrate-nitrogen on growth of greenhouse tomatoes in soils of different reaction, B.,

Hoffman, J. G., Livingston, M. S., and Bethe, H. A., magnetic moment of the

neutron, A., I, 163. Hoffman, M. B., effect of lime-sulphur spray on respiration rates of apple leaves, B., 600.

Hoffman, O., factors antagonising the thyroxine influence on differentiation, A., III, 152.

Hoffman, W. F., and Cellovis, Inc., fibrous cellulose mass and chemical reaction therewith, (P.), B., 29.

and Northwest Paper Co., treatment of coffee beans, (P.), B., 1266.

Hoffman, W. S., colorimetric determination of scrum-magnesium based on hydroxyquinoline precipitation, A., III, 165. Photo-electric determination of potassium in minute quantities of serum, A., III, 373. Photo-electric determination of glucose in blood and urine, A., III, 448. Hoffmann, A. See Hilpert, R. S.

Hoffmann, B., Shenstone, A. G., and Turner, L. A., coincidence in time in

Compton scattering, A., I, 55.

Hoffmann, C. See Tschitschibabin, A. E. Hoffmann, E. (Moscow), determination of mean dispersity by means of the photo-cell, A., I, 99. Dispersoid analysis with photo-electric cell, A., I, 374. Sedimentation analysis with a sp. gr. balance, A., I, 480. Electrophoretic concentration of graphite suspensions, B., 312.

See also Britzke, E. V., and Kapustinski,

Hoffmann, Eugen, Holschneider, F. W., and Winterfeld, K., lupin alkaloids. XIII. Fission of the piperidone ring of lupanine by fuming hydrochloric acid, A., II, 219.

Sec also Winterfeld, K. Hoffmann, F. Sce Anselmino, K. J. Hoffmann, F. G., pyknometer, A., I, 100. Hoffmann, G. See Franck, H. H.

Hoffmann, G. F., and Pittsburgh Plate Glass Co., polyhydric alcohol-polybasic acid-monobasic aliphatic acid anhydride condensation product, (P.), B., 158. See also Noyes, W. A.

Hoffmann, H., preparation of bituminous coal in the Saar district, B., 199. French examination of Saar coals, B.,

and Kühlwein, F. L., Saar coals and their coking, B., 513.

Hoffmann, J., photolysis of sodium chloride by X-, β -, and γ -rays, A., I, 472. Discoloration of phosphate (ultra-violet) glasses, B., 1338. Hoffmann, J. I., and Lundell, G. E. F.,

at. wt. of aluminium, A., I, 160. Determination of phosphoric anhydride in phosphate rock, superphosphate, and "metaphosphate," B., 1046.

Hoffmann, K. See Ostwald, Wolfgang, and Wannow, H. A. Hoffmann, M., plant for treating sewage,

(P.), B., 850. Hoffmann, O., and Semenza, C., special

cements for hydraulic works and large dams, B., 785.

Hoffmann, O. (Hohenheim), colorimetric determination of phosphoric acid in Neubauer [seedling-test] ash, B., 1099. Hoffmann, P. E. See Fluhmann, C. F.

Hoffmann, R. See Bernhauer, K. Hoffmann, W. See Mannich, C., and Reichert, B.

Hoffmann-La Roche & Co., Akt.-Ges., F., dihydrodeoxymorphine D, (P.), B., 88. Salicylic esters of acylglycols [medicinals], (P.), B., SS. N[I]-Methyl-CC[5:5]-allylisopropylbarbituric acid [narcotic], (P.), B., 88. Sugar derivatives of 1:2-diamino - 4:5 - dimethylbenzene [4:5 - diamino-o-xylene], (P.), B., 120. Moine and codeine, (P.), B., 188. Alloxazine derivatives, (P.), B., 220. MorphHoffmann-La Roche & Co., Akt.-Ges., F., derivatives of 2:4-dioxo[keto]tetrahydropyridinc, (P.), B., 289. 2:4-Dioxo[keto]-3:3-dialkyltetrahydropyridines, (P.), B., 289. Sodium N-methyl-CC-allylisopropylbarbiturate in a stable, dry state readily soluble in water, (P.), B., 290. Double compounds of sec. amides of 3:5-dimethylisooxazole-4-carboxylic acid, (P.), B., 329. l-Ascorbic acid, (P.), B., 620. Amide derivatives of isooxazolecarboxylic acids, (P.), B., 843. Halogenated pyridine derivatives, (P.), B., 1316. Hoffmann-La Roche, Inc. See Elger, F.

Hofman, E. O., automatic pipette for sedimentation analysis, A., I, 332. Hofmann, A. See Dittler, E.

Hofmann, Albin. See Tropp, C. Hofmann, E., heat-transfer equation for

fluid flow in tubes, B., 1141.

Hofmann, H., and Amer. Bemberg Corp., conditioning of artificial thread, (P.), B., 128, 430. Regulation of precipitant in production of artificial thread, (P.), B., 1192. Hofmann, H. J. See Fischer, Hans.

Hofmann, K. See Ruzicka, L. Hofmann, P. Sec Meerwein, H.

Hofmann, U., and Bilke, W., intracrystalline swelling and base-exchange power of

montmorillonite, A., I, 17.

Hofmann, W., Schrader, A., and Hanemann, H., hardening, deformation, and recrystallisation of lead-antimony alloys, B., 572.

See also Hanemann, H. Hofmeier, H. See Nowak, P. Hofstetter, H. See Nord, F. F. Hogaboom, G. B., losses from plating

solutions, B., 453. Removal of carbonates from metal cyanide solutions, B., 541. Electrodeposition of zinc, B., 684. $p_{\rm H}$ of alkaline plating solutions, B., 1358.

Hogan, A. G., and Johnson, S. R., plant extracts in nutrition of guinea-pigs and rabbits, A., III, 127.

and Richardson, L. R., effects of ultraviolet rays on vitamin-B, A., III,

and Ritchie, W. S., nutritional properties of meat, A., III, 466.

See also Johnson, S. R., Richardson, L. R., and Robbins, W. J.

Hogan, M. A., wire ropes for mines, B., 789.

Hogarth, L. T. See Dippy, J. F. J. Hogden, C. G. See Robinson, H. W. Hogentogler, C. A., and Willis, E.

essential considerations in the stabilisation of soil [for road surfaces], B., 1055. Hoglund, G. O., spot- and scam-welding of aluminium alloys, B., 796.

Hogness, T. R., Zscheile, F. P., jun., and Sidwell, A. E., jun., photo-electric spectrophotometry; apparatus for the ultra-violet and visible spectral regions: its construction, calibration, and application to chemical problems, A., I, 331. Absorption spectra of compounds related to sterols, A., I, 494.

Zscheile, F. P., jun., Sidwell, A. E., jun., and Barron, E. S. G., cyanide hæmochromogen; ferriheme hydroxidecyanide reaction: its mechanism and equilibrium as determined by the spectro-electric method, A., III, 163. Hogreve, F., internal secretions and milk

production, A., III, 490.

Hohl, L., and Cruess, W. V., effect of temperature, variety of juice, and method of increasing sugar content on maximum alcohol production by Saccharomyces ellipsoideus, A., III, 70.

Sce also Cruess, W. V.

Hohlbaum, R, application of oil firing in

the glass industry, B., 1048.

Hohls, H. W., dispersion and absorption of lithium fluoride and sodium fluoride in the infra-red, A., I, 402.

Holm, H., polarographic analysis of brass; principles of rapid series analysis of alloys, carried out with the dropping mercury cathode, B., 452.

Hohorst, G., Hsianglin, H., Liu, F. Y., Chow, R., and Wen, S. P., recovery of alumina and fertilisers from Chinese alunite. III., B., 904.

and Hsiao-hai, W., recovery of alumina and fertilisers from Chinese alunite.

III., B., 1045.

Wang, H. H., and Chang, Tsien Y., recovery of alumina and fertilisers from Chinese alunite. III., B., 236.

Hoisington, L. E. See Hudson C. M. Hoke, C. M., melting of platinum, B., 246.

Holbrook, W. F., and Joseph, T. L., relative desulphurising powers of blastfurnace slags, B., 1347.

Holbrook, W. L., and Parker, W. R.,

surfacing material, (P.), B., 1057.

Holck, H. G. O., Kanan, M. A., Mills, L. M., and Smith, E. L., sex-difference in rats in tolerance to barbiturates and nicotine, A., III, 478.

Holcomb, H. E., and Johns-Manville Corp., adhesive composition, (P.), B., 163. Holden, A. F., composition for case-

hardening [of steel], (P.), B., 1225. Holden, E. C., and Davison Chem. Corp. dehydration and purification of [liquid]

carbon dioxide gas, (P.), B., 668. Holden, F. R. See Burgess, W. M., and Harrold, G. C.
Holden, H. F., methæmoglobin, a spectro-

photometric study, A., III, 83. naturation of hamoglobin, A., III, 194.

Holden, J. See Halden & Co., J. Holden, T. N., and Decker, J. W., pro-

jection screen, (P.), B., 295. Holder, C. H., and Maass, O., densitypressure-temperature relations of the hydrogen chloride-propylene system in critical temperature pressure region; reaction velocity near critical temper-

ature, A., I, 560. Holding, H. R. See Downing, G. H. Holdon, R. F., jun., determination of

fermentable blood-sugar by measurement of carbon dioxide formed by the action of yeast, A., III, 291.

Holdt, C., identity of the oiticica tree and

uniformity of the oil, B., 1233.

Holford, H. J., apparatus for distillation of carbonaceous material, (P.), B., 643. Holgate, J. B. See Greenwood, John.

Holiday, E. R., absorption spectrography for detection of detailed structure of absorption spectra, A., I, 378. Spectrographic identification of nicotinic acid in Staphylococcus aureus growth factor concentrates, A., III, 397.

Holl, E., acrylic acid resins as lacquer materials, B., 1371.

Holl, H. See Ziegler, K. Holl, K., removal of lead and copper from drinking water, B., 849.

Hollabaugh, C. B. See Hercules Powder

Hollaender, A., and Curtis, J. T., effect of sublethal doses of monochromatic ultra-violet radiation on bacteria in liquid suspensions, A., III, 72. See also Claus, W. D., and Rakestraw,

Holland, A. J., and Turner, W. E. S., mechanical strength of glass, B., 137. Holland, E. B. See Beaumont, A. B.

Holland, H. C. See Page, R. O.

Holland, H. G., medication of sheets or webs of paper, fabric, or similar materials, or articles made thereof, (P.), B.,

Hollander, F., Penner, A., and Saltzman, M., determination of phenol-red in gastric contents, A., III, 417.

Holle, A. See Bauer, K. H. Holleck, L. influence of carbon on film formation in the anodic passivation of steels, B., 578.

and Noddack, W., preparation of compounds of bivalent rare earths, A., I, 628.

Holleman, L. W. J., and De Jong, H. G. B., electroviscous effect and reversal of charge in sodium arabate sols with uni-, bi-, and ter-valent cations, A., I, 409.

See also De Jong, H. G. B. Hollenback, E. H. See Herty, C. H., jun. Hollenberg, A. V., hyperfine structure of the resonance lines of rubidium, A., I, 486.

Holler, F., thermal conductivity of silicon carbide refractory bricks, B., 783.

Holler, H. D., atmosphere from hot charcoal for annealing copper, B., 1353.

Sec also Westinghouse Elec. & Manufg. Co. Hollett, A. R., use of inhibitors in acid solutions employed to clean water-pipes,

Holley, C., and Bernstein, Seymour, grating space of barium-copper stearate films, A., I, 604.

Holley, K. T., and Dulin, T. G., ammonia and nitrate-nitrogen for cotton. III. Influence of the nitrogen concentration in the nutrient medium. IV. Influence of the boron concentration, B., 823.

Hollinger Mill Staff. See Longmore, E. L. Hollings, H., formation of nitrogenous gum during storage and distribution of gas, B., 9. Determination of nitric oxide in [coal] gas, B., 639.

Hollon, H. C. See Forsbeck, F. C. Holloway, T. B. See Ravdin, I. S.

Hollows, J. H., mechanical drying in vitreous enamelling, B., 781.

Hollub, J., search for new Hungarian tanning materials, B., 1093.

Holly, L. F., separating apparatus, (P.),

Holly, O. M. See Sandberg, M.

Holm, G. E., Wright, P. A., and Deysher, E. F., phospholipins of milk. IV. Their chemical nature and distribution in milk

products, B., 1121. Holm, M. M. See Standard Oil Co.

Holm, R., electric discharge in gases investigated with the cloud chamber, A.,

and Güldenpfennig, F., transference of matter in electrical switch contacts, B., 1073.

Holman, A. T., terrace cross-sections as influenced by soil, crops, land slopes, and farm machinery, B., 596.

Holman, R., flow and protein content of subcutaneous lymph in dogs of different ages, A., III, 377.

Holman, W. M., and Pollard, A. G., colorimetric determination of phosphate with special reference to displaced soil solution, B., 1385.

Holman Brothers, Ltd. See Rule, J., and Wetherill, C.

Holmberg, A., sintering of concentrates, ores, etc., (P.), B., 935, 1224.

Holmberg, B., persulphate oxidation of benzylidenebisthiolacetic acid, A., II, 30. Phenacylthiolacetic acid and related compounds, A., II, 61. Thiolacetic acids and methyl sulphate, A., II, 322.

Sec also Hellström, N.

Holmberg, C. O. See Parsons, L. B.

Holmbergh, O., activation of malt amylase by shaking, A., III, 482.

Holmes, A., analyses of tertiary igneous rocks from Antrim and Staffa, A., I, 156. Petrology of katungite, A., I, 432.

[with Hecht, F.], transfusion of quartz xenoliths in alkali basic and ultrabasic lavas, S.W. Uganda, A., I, 155.

Holmes, A. D., Tripp, F., and Satterfield, G. H., ox, hog, calf, and lamb livers as sources of vitamin-A, B., 182. Vitamin-A content of cod-liver oil; comparison of spectrophotometric and chemical methods, B., 1367.

Holmes, B., metabolism of filter-passing organism A from sewage, A., III, 276. and Kirk, P. L., micro-volumetric sodium method of Ball and Sadusk, A., III, 52.

Holmes, B. E., glucose and hexose diphosphate breakdown in tumour tissue, A., ÎII, 470.

Holmes, C. E. See Herrick, C. A. Holmes, C. R. See Fieldner, A. C.

Holmes, C. W. H., coal sampling, B., 998. Holmes, E. G. See Bach, S. J.

Holmes, F. B., wet-purification plant [for coal gas], B., 515.

See also Du Pont de Nemours & Co., E. I. Holmes, F. E., thermoregulator for direct control of the electric circuit in a heating bath, A., I, 634.

Holmes, F. T., separation of close spectral

lines by the method of anomalous dis-

persion, A., I, 271. Holmes, G. M. See Patterson, T. S. Holmes, H. L. See Fieser, L. F.

Holmes, H. N., and Corbet, R. E., crystalline vitamin-A concentrate, A., III, 153. Holmes, L. G., grinding mills, (P.), B., 993. Grinding mills for treating paints, greasy inks, and similar substances, comprising a grinding bar with uniformly divided [distributed] pressure, (P.), B., 993.

Holmes, M. C., terrestrial origin of cosmic rays, A., I, 277.

Holmes, R. J., X-ray study of allemontite, A., I, 434.

Holmes, R. S. See Slater, C. S.

Holmes, S. See Baudusch, O. Holmes, W. C., continuous blending, for a

predetermined quality, of liquids having different specific gravities, (P.), B., 402. Holmquist, P.J., so-called "hollow canals"

in calcspar, A., I, 401. Holschneider, F. W. See Hoffmann, Eugen. Holslag, C. J., and Manhattan Co., changing the grain structure of metals [electric

welding], (P.), B., 935.

Holst, E. C., Zyyosaccharomyces pini, a new species of yeast associated with bark

beetles in pines, A., III, 70.

Hoist, G., photochemical antagonism of radiations, A., I, 255. Franck's principle of photochemical energy balance and its application to reversible oxidationreduction reactions, A., I, 309. Oxidation-reduction potentials. III. Relations between oxidation-reduction potential and reaction velocity. IV. Substituted hydrazine- and diazo-sulphonates, A., I, 310, 620. Photochemistry of reversible reduction-oxidation processes. I. Quantum sensitivity of photochemical reaction between methylene-blue and phenylhydrazinesulphonate in yellow and red light, A., I, 472. Use of Jena dispersion filter as a monochromator for photochemical purposes, A., I, 479. Holst, W.H. See Coleman, G.H.

Holste, A. See Förster, F. Holstein, E., health hazards among painters with reference to industrial lead poisoning, B., 846.

Holstein, O., identification of beryl and emerald by means of the "Universal"

lens, A., I, 204.

Holstein & Kappert Maschinenfabrik 'Phönix'' Ges.m.b.H., and Fehrmann, K., processes and devices for the sterilising by heat] and cooling of gas-containing liquids, (P.), B., 995.

Holt, B. M. See Hauser, E. A. Holt, D. A. See Du Pont de Nemours & Co., E. I.

Holt, H., jun. See Oldham & Son. Holt, H. S. See Du Pont de Nemours & Co., E. I.

Holt, L. C., Youker, M. A., Laird, R. F., and Kinetic Chemicals, fluorination process and apparatus, (P.), B., 1169.

Holt, L. E., jun. See Aylward, F. X., Nachlas, A., and Richter, C. P.

Holt, M. L., metals co-deposited with tungsten from the alkaline tungsten plating

bath, B., 798.

Holt, P. F. See Briscoe, H. V. A.,
Hodgson, H. H., and Matthews, (Miss) J. W.

Holt, T. T., filler, marking, and coating composition, (P.), B., 1243.

Holt, W. L., and McPherson, A. T., change of volume of rubber on stretching: effects of time, elongation, and temperature, B., 265.

Holtcamp, H. H. J. See De Boer, S. Holter, A., concrete road surfaces, (P.), B., 349, 788.

Holter, H., and Linderstrøm-Lang, K.,

distribution of enzymes in protoplasm, A., III, 97.

and Northrop, J. H., activation of partially purified pepsinogen, A., III, 68. Holtermann, C., and Laffitte, P., new oxide

of lead, A., I, 473.

Holtman, C. L., substances adapted to

decrease blood-pressure, (P.), B., 392.

Holtom, G. F. See Chaikoff, I. L. Holton, C. S., and Heald, F. D., control and other aspects of bunt in wheat, B., 274.

Holton, W. B. See McKinney, R. S.

Holtz, J. D. See Trautz, M. Holtz, P., histamine formation from histidine through ascorbic acid, A., II, 117. Formation of histamine from histidine by catalytic oxido-reduction, A., II, 402. Detection and determination of corpus luteum hormone, A., III, 74. Formation of tyramine by animal tissue, A., III, 384.

Holtz, P., and Heise, R., formation of histamine in the organism, A., III, 210.

and Triem, G., production of peroxide during auto-oxidation of ascorbic acid and of thiol compounds, A., II, 367. Ascorbic acid and histidase, A., III, 281. Degradation of histidine by ascorbic acid and thioglycollic acid, A., III, 383.

and Wöllpert, K., reaction of adrenaline on cat and guinea-pig uterus during different stages of the sexual cycle and the effect of hormones, A., III, 320.

Holwerda, K., hydrolysis rates of monoacid triglycerides under influence of pancreatic extract. III. Influence of reaction product and constitution of the triglyceride on the hydrolysis rate, A., Ì, 418.

Verkade, P. E., and De Willigen, A. H. A., hydrolysis rates of monoacid tri-glycerides under influence of pancreatic extract. II. Influence of reaction products and constitution of the triglyceride on the velocity of hydrolysis, A., III, 268.

Holz, F., and Vacca, C., briquetted fuel, (P.), B., 317.

Holzhauer, C., material and properties of

light steel [gas] cylinders, B., 245.

Holzman, M. See Sobotka, H.

Holzmann, E., production of gasoline by adsorption, B., 517.

Holzmüller, W., dependence of dielectric loss on constitution and size of molecule of ketones, A., I, 444.

Holzwarth, H., and Holzwarth Gas Turbine Co., heat interchange with compressed gases, (P.), B., 630.

Holzwarth Gas Turbine Co. See Holzwarth, H.

Homann, F. See Fritz, W.

Homer, \hat{C} . E., and Plummer, H., mechanical properties of white bearing metals and other tin-base alloys at various temperatures, B., 1065.

Homes, G. A., problems of internal physics of [metallic] materials, B., 928.

Brunin, M., and Duwez, P. E., state of

dislocation of deformed metallic crystals, A., I, 556.

Homès, M., permeability of the vegetable cell to mineral salts, A., III, 283.

and Schoor, G. van, growth substances in Elodea canadensis, A., III, 285. Homeyer, A. H. See Whitmore, F. C.

Hommel, F., electrical and optical properties of semi-conductors. XIV. Magnetic measurements on cuprous oxide, A., I,

Hommel Co., O. See Rosenberg, J. E. Hommes, K. J., effect of light on decomposition and detection of blood in connexion with forensic examinations, A., III, 196.

Honda, K., and Hirone, T., magneto-caloric effect on the Honda-Okubo theory of ferromagnetism, A., I, 18. Formation of flakes in steel ingots, B.,

and Nishina, T., temperature dependence of the intensity of magnetisation of ferromagnetic substances in weak magnetic fields, A., I, 69.

and Shimizu, Y., variation of magnetic susceptibility of water with tem-perature, A., I, 404.

Honde, E. See Asada, T.

Honig, P., theoretical and technical aspects of sugar crystallisation, B., 961.

Honnelaitre, A. See Malfitano, G.

Honrath, W., band fluorescence of alkali crystals containing oxygen and carbon monoxide, A., I, 392. Honus, O. F. See Gronow, H. E. von.

Hood, E. G., and White, Arthur H., single and double parchment liners for butter, B., 1123.

Hood, G. R., and Williams, J. C., viscosity and fluidity of aqueous potassium ferro-

cyanide solutions, A., I, 613.

Hood, H. P., and Corning Glass Works, fining of borosilicate glasses, (P.), B.,

See also Corning Glass Works.

Hood, N. R. See Imperial Chem, Industries.

Hood Rubber Co., Inc. See White, D. L. Hoofdcommissie voor de Normalisatie in Nederland, dry pigments; specification tests: zinc oxide; white lead; litho-pone; red lead; ferric oxide; ochre, umber, and terra di Siena; [lead] chromate-yellow; Prussian-blue; Bremen-green, B., 156, 944.

Hooft, C. G. 'T. See Clay, J.

Hooft, F. V., and Lucidol Corp., autoxidation and polymerisation catalyst [for tung oil], (P.), B., 258. Treatment of commercial dicalcium phosphate, (P.), B., 667.

Hoogeveen, A. P. J., chemical weapons, B., 296.

Hoogstraten, C. W. van, smoke and cloud producers, B., 295. Incendiary media, B., 296. Decontamination, B., 504.

and Capel, L. W., detection of mustard gas with the "Dräger-Schröter" apparatus and that of Ligtenberg, B., 1412.

Hook, A. van, continuity of the metastable state, A., I, 463.

Hook, W., formation of graphite in the pyrolysis of organic compounds, A., I,

Hooker, A. B., Coggeshall, E. J., and Jones, G. W., behaviour of flame safety lamps in mine atmospheres deficient in oxygen, B.,

Hooker, G. W. See Dow Chem. Co.

Hooker, S. B., and Follensby, E. M., is antibody-globulin "denatured" by its combination with antigen? A., III, 413.

Hooker Electrochemical Co. See Esselen, G. J., and Osborne, S. G.

Hoon, R. C. See Puri, A. N. Hooper, C. W., and Winthrop Chem. Co., water-miscible vitamin preparations containing vitamin-D, (P.), B., 188... See also Winthrop Chem. Co.

Hooper & Sons Co., W. E. See Heffner, L. L., and White, C. B.

Hoos, B. G. See Schur, M. O.

Hoover, A. A. See Drummond, J. C. Hoover, C. O., and Bennett-Clark Co., purifying and treating hydrocarbon oils, (P.), B., 873. Purifying hydrocarbon oils, (P.), B., 873. Refining hydrocarbon oils, (P.), B., 873. Sweetening hydrocarbon oils, (P.), B., 873.

Hoover, J. R., and Klein, H. C., rubberlined equipment; fundamental principles

of design, B., 949.

Hoover, W. H., dependence of carbon dioxide assimilation in a higher plant on the wave-length of radiation, A., III, 235.

Hope, G., physicochemical investigations of human sweat, A., III, 170.

See also Keining, E.

Hope, P. A., [screw-threaded] articles from synthetic resin or similar mouldable material, (P.), B., 1244.

Hope, V., electric fuses [of copper wire], (P.), B., 150.

Hopf, H. See Heinze, R.Hopf, H. S., protein digestion of wood-boring insects, A., III, 210.

Hopfermann, H., and Wittke, H., magnetic moment of the scandium nucleus, A., I,

Hopfield, J. J., and Watkins, G. B., refraction of tempered plate glass, B., 546.

Hopkins, B. S., and Taebel, W. A., rare earths as catalysts, A., I, 192.

Hopkins, C. P., and Latimer-Goodwin Chem.

Co., insecticide, (P.), B., 1255. Hopkins, E. S., determination of the density of powdered activated carbon, B., 745.

Hopkins, H. L. See Aluminum Co. of America, and Kempf, L. W.

Hopkins, R. F. See Hersey, M. D.Hopkins, R. H. See Bailey, K.

Hopkins, R. K., chromium-bearing steels in pressure-vessel construction, B., 575. and Kellogg Co., M. W., welding electrode, (P.), B., 799.

Hopkinson, L. T., fish meal and oil, (P.), B., 495.

Hopkirk, C. S. M., facial dermatitis in sheep in New Zealand; photosensitivity of unpigmented skin, A., III, 205. port of Wallaceville veterinary laboratory, A., III, 207.

See also Cunningham, I. J., and Grim-

mett, R. E. R.Hopper, B. See Union Oil Co. of California.

Hopper, C. B. See Stewart, J. K. Hopper, T. H., and Nesbitt, L. L., relation between refractive index and iodine value of raw linseed oil, B., 462.

See also Christensen, F. W.

Hopperstead, S. L. See Anderson, H. W. Hoppert, C. A. See Bechtel, H. E. Hopson, H. See Pearce, J. N. Horak, W., compressing town's gas at

Vienna for use in motor vehicles, B., 863. Horat, L. E., [determination of] acid- and base-forming quality of fertilisers, B.,

Hordh, U., sulphur dioxide and sulphuric acid in food products, B., 1126.

Horeau, A. See Delépine, M.

Horie, F., composition of Fushun shale XII. and XIII., B., 1004.

oil. XII. and XIII., B., 1004. Horii, Z., hydrazones and semicarbazides from p-thiocyanophenylhydrazine, A., II, 411.

Horine, F. L., use of filter-aids in improving quality of refined [oil] products, B., 1005.

Horiuti, J., and Okamoto, G., determination of the number of interchangeable hydrogen atoms in complex salts, A., I, 259.

Horkheimer, P., preparation and keeping qualities of 0.1 N-sodium thiosulphate, A., I, 44.

Hormisdas. See Riou, P.

Hormuth, R. Sec Kantsky, H.

Horn, C. L. See Read, C. F.

Horn, E. See Spengler, O. Horn, E. E., Ward, J. C., Munch, J. C., and Garlough, F. E., effect of thallium on plant growth, B., 273.

Horn, F., copper compounds of o-aminophenol and its N-alkyl derivatives, A., II, 495. Degradation of dicthylaniline and diethylaniline oxide in the animal body, A., III, 469.

Horn, H., and Petzholdt, J. S., machine for working liquid, pulverulent, and granular masses, (P.), B., 1290.

Horn, L. V. See Standard Oil Co. Horn, M. J. See Jones, D. B.

Hornberger, C. S., and Central Scientific Co., constant-temperature bath, (P.), B., 635.

Hornbostel, W. See Damm, H.

Hornby, H. E., nature of resistance to treatment shown by cases of bovine trypanosomiasis, A., III, 257. See also French, M. H.

Hornel, J. C. See Halford, R. S. Horner, C. K. See Burk, D.

Horner, G., texture of canned fruit and vegetables, B., 283. Gases in canned foods. I. and II., B., 283, 493. Determination of copper in tomato purée, B., 493. Mineral content of canned vegetables, B., 1125. See also Adam, W. B.

Horner, H. R. See Derby, I. H.Horner, J. W. See Lea Recorder Co.

Horner, L. See Wieland, H.

Hornhardt, H. See Mumm, O. Hornig, A. W., laminated glass, (P.), B.,

Horning, E. S. See Cramer, W.

Hornke, W., rapid determination of lime and magnesia, A., I, 327. Aluminium from clay, B., 576. Specific surface of cement, B., 1055.

Sec also Hecht, H.

Hornung, V., salt plants and the replacement of common salt by plant ashes, B., 1198.

Horovitz-Vlassova, L. M., aërobic decomposition of cellulose, A., III, 272. Horowitz, N. H. See Tyler, A.

Horrex, C., catalysis of maleic-fumaric acid isomerisation by hydrogen ions, A., II, 228.

and Polanyi, M., atomic interchange between water and saturated hydrocarbons, A., I, 143.

See also Burkhardt, G. N.

Horsfall, F., jun., effect of thiourea on proximal dominance in the sweet potato, B., 599.

Horsfall, F. L., jun., and Goodner, K., lipins, and immunological reactions. I. Relation of phospholipins to typespecific reactions of antipneumococcus horse and rabbit sera, A., III, 117.

Goodner, K., and MacLeod, C. M., type-specific antipneumococcal rabbit

serum, A., III, 86. Horsfall, J. G. See Magie, R. O. Horsfall, R. B., jun. See Almy, G. M.

Horsley, G. F. See Applebey, M. P. Horst, D. T. J. ter, and Krijgsman, C., oxidation of transformer oil, B., 111.

Horst, (Miss) H. van der. See Keesom, W.H.

Horst, I. ter. Sec Dilthey, W., and Schmitz-Dumont, O.

Horst, K., Willson, R.J., and Smith, Ralph G., effect of normal and caffeine-free coffee on oxygen consumption, pulse rate, and blood pressure [of men], A., III, 65.

Horst, L. A. von, preparation of hop extracts, B., 278. Hopping of beer wort

with hop extract, B., 278.

Horst, W. P. ter. See Ellis, C., and Wingfoot Corp.

Horton, A. T. See Bowen, E. J. Horton, B. T. See Rynearson, E. H. Horton, C. A. See Foster, J. S. Horton, E. A. See Watson, S. J.

Horton, E. R., [ore] concentrator, (P.), B., 993.

Horton, F. See Precision Meters, Ltd. Horton, P. J., jun., and Bean, E. L., ferric sulphate coagulation [in water purification], B., 625.

Horton, S. D. See Calingaert, G. Horvath, A. A., chemistry of soya-bean protein extraction, B., 1126.

and Wilmington Fibre Specialty Co., insulating composition, (P.), B., 1145. Horvath, K., effect of paprika on meta-bolism of fat, A., III, 129.

Horvay, G., slowing down of neutrons in

water, A., I, 58. Horwitt, M. K., and Cowgill, G. R., determination of lead in biological material, A., III, 410. Effects of minute amounts of lead in the diet

of the dog, A., 111, 427.

Cowgill, G. R., and Mendel, L. B., availability of proteins and inorganic salts of the green leaf; availability of carbohydrates and fats of the green leaf: crude fibre, A., III, 238.

Horwood, H. C., granitisation in the Cross Lake region, Manitoba, A., I, 101.

Hoseh, M., heat of wetting of some soil colloids at different moisture contents, B., 706.

Hošek, M. See Dostal, R.

Hosemann, R., determination of orientation of crystallites in fibrous substances, A., I, 534.

Hoshi, M. See Kimura, Yushiro. Hoshino, S. See Masamune, H.

Hoshino, T., and Ohta, M., synthesis of aneurin, A., II, 307.

Hosken, J. C. See Anderson, G. W. Hoskins, C. R., determination of ethyl alcohol in presence of acctone, A., II, 364. Hoskinson, C. M., mixing [of coagulant with water supply], B., 192.

Hosni, M., and Shafik, M., a mealy bug Pseudococcus brevipes, Ckll.) new to Egypt on roots of Phoenix spp.; control by application of chemicals to soil, B., **4**82.

Hošpes, B., is the content of bound starch a reliable means for judging efficiency of the [potato-]grinding process? B., 1256. Hostettler, H., and Zollikofer, E., influence of hydrogen-ion and lactic acid concentration on the growth of Bacillus putri-

ficus, A., III, 397. Hotchkiss, A. G., effect of water vapour on hot metal, B., 919.

Hothersall, A. W., adhesion of electrodeposited nickel to nickel, B., 452. Control in electrodeposition processes, B., 1068.

and Bradshaw, W. N., electrodeposition of tin from acid sulphate solutions, B., 924.

and Gardam, G. E., sources of organic contaminants in nickel-depositing solutions and methods of purification, B.,

Hotta, K., and Takagi, K., cholesterol content of the nails of animals, A., III, 339. Hottel, H. C., and Smith, V. C., radiation from non-luminous flames, A., I, 336. Sec also Hershey, R. L., and Parker,

A. S.Hottenroth, G., electron mirrors, A., I, 99.

Hotzel, J. See Danckwortt, P. W.

Hon, H. C., fixation of ascorbic acid by tissues, A., III, 44. Vitamin-C content of orange peel and its pharmaceutical preparations, B., 81.

Hou, K. C. See Mattson, S.

Houben, L., measurement of stretch of belting leathers, B., 1381.

Houchin, O. B. See Graham, W. R., jun.

Houck, R. C. See Kodak, Ltd. Houdremont, E., and Bandel, G., attack of hot gases on heat-stable steel, B., 1060, and Schrader, Hans, grain size of steel; its determination, its effect on the properties of steel, and the means of influencing it, B., 560.

Houdry, E. J., and Houdry Process Corp., motor fuel, (P.), B., 322.

See also Faragher, W. F., and Houdry Process Corp.

Houdry Process Corporation, and Houdry, E. J., control of exothermic reactions, (P.), B., 97.

Houdry, E. J., and Prickett, T. B., temperature control of reaction vessels, (P.), B., 1287.

and Prickett, T. B., control of catalytic operations, (P.), B., 97. Temperature control of reaction vessels, (P.), B., 1287. Apparatus for treating fluids, (P.), B., 1287.

Prickett, T. B., and Lassiat, R. C., converters and their assembly, (P.),

B., 1287.

and Thayer, C. H., apparatus for contact treatment of materials, (P.), B., 1287. See also Daugherty, J. P., jun., Faragher, W. F., Hammell, R. H., Harrison,

J. W., Houdry, E. J., and Joseph, A. Houet, R. Sco Florkin, M. Hougardy, H., acid-resisting steels in the

chemical industry, B., 918. Rust- and acid-resisting steel in the oil and soap industry, B., 941. Importance of rustand acid-resisting steel in soap-making, B., 1078.

Hougen, O. A. See Ceaglske, N. H. Hough, A. I., mounting of [Berkefeld] filter candles [for tannin analysis], B.,

Hough, W. S., spray residues and their removal from apples, B., S1.

Houghland, G. V. C., reclamation of potato land flooded by salt water, B., 709.

Houghton, G. U., and Pelly, R. G., colorimetric determination of traces of phenol in water, B., 505.

Houghton, H. D. See Doran, H. M. Houghton, J. L., and Prytherch, W. E., magnesium alloys, (P.), B., 934.

Houlbert, C. See Galaine, C.

Hounsell, E. R., and Parton, H. N., thermodynamic study of systems of the type PbCl₂-RCl-H₂O at 25°. VII., A., I, 306.

Houssa, P., carbohydrate tolerance following ligature of the pancreatic ducts of the dog, A., III, 21. Post-insulin bloodsugar after ligature of the pancreatic duct in dogs with glandular hyper-function, A., III, 230.

Houssay, B. A., effect of hypophysectomy on pregnancy and lactation in dogs, A., III, 184. Production of milk secretion in female and male dogs by anterior pituitary extract, A., III.

and Biasotti, A., rôle of pituitary and adrenal glands in pancreatic diabetes of the toad, A., III, 38.

Biasotti, A., and Dambrosi, R. G., glycogen and the pituitary, A., III, 320. and Foglia, V. G., diabetogenic function of the pituitary anterior lobe and the pancreas, A., III, 39. Houssay, B. A., Marenzi, A. D., and Gerschman, R., blood-potassium and the sympathetic-adrenaline-hepatic mechanism, A., III, 114. Changes in potassium and the sympathetic-adrenaline-hepatio mechanism following pathological or pharmacological conditions, A., III, 137.

Houssiau, A., Porion furnaces [for vinasses]; odour, fumes, and loss of salts, B., 1116. Houston, W. V., structure of H_a and D_a , A., I. 207. Calculation of binding

energies in light nuclei, A., I, 492. Houstoun, R. A., time lag of the vacuum

photo-cell, A., I, 113, 379. and Younger, A. J., colorimetry with a spectrometer, A., I, 151. Houtermans, F. G. See Fomiu, V.

Houwink, R., colloid chemistry and physics of organic plastics, B., 60.

and Klaassens, K. H., viscosity-concentration relations in concentrated solution and their energetic significance. III., A., I, 355.

Houze, L. J., and Houze Convex Glass Co., L. J., lehr, (P.), B., 38.

Houze Convex Glass Co., L. J. See Houze, L.J.

Hoveman, F. C. See Hoveman, W. A. Hoveman, J. A. C. A., freezing and preserving of food-stuffs and other substances, (P.), B., 1406.

Hoveman, W. A., and Hoveman, F. C.,

liquid-filtering apparatus, (P.), B., 1147. Hovers, J. See Pieters, H. A. J.

Hovey, A. G., and Reichhold Chemicals, condensation product [artificial resinplasticiser], (P.), B., 1241.

Hovorka, F., and Anthony, J. K., electrode potentials; relation to corrosion of alloys and metals in lubricating oils, B., 1073.

Schaefer, R. A., and Dreisbach, system dioxan and water, A., I, 23. and Simms, J. C., conductivity of salts in n-propyl and isopropyl alcohols, A., I, 139.

Hovorka, V., determination of lead by means of 8-hydroxyquinoline, A., I,

Howard, A., manufacture of humas by the Indore process, B., 1097. Howard, F. A. See Standard Oil Develop-

ment Co.

Howard, G. C. See Sandborn, L. T. Howard, G. P. E. See Kent, Ltd., G. Howard, H. C., polymeric character of

bituminous coal, B., 301. See also Juettner, B., and Smith, R. C.

Howard, H. W. See Sullivan, M. X. Howard, J. B., rotation-vibration spectrum of C_2H_6 and the question of internal rotation, A., I, 112. Normal vibrations and the vibrational spectrum of C_2H_6 , A., I, 398. Rotation-vibration spectrum of C2H, and the question of free internal rotation, A., I, 398.

Howard, J. V. See Lander, C. H. Howard, J. W., opals, A., I, 204. Howard, L. B., and Hilbert, G. E., alleged absorption of gaseous nitrogen by benzene solutions of rubber and guttapercha hydrocarbons, B., 265. Howard, N. F., Mason, H. C., and Davidson,

R. H., derris for control of vegetable

insects, B., 171. Howard, N. J., observations in the Toronto [water-]filtration laboratories during the past 25 years, B., 505. Howard, P. L. See King, C. V.

Howard, W. R. See Universal Oil Products Co.

Howards & Sons, Ltd., and Huggett, W. E., diterpones, (P.), B., 219.

and Lock, R. H., glycerol monolactate, (P.), B., 21. Manufacture and application of a plasticising agent for cellulose derivatives, (P.), B., 947.

Howarth, H. C. Sec Greenwald, H. P. Howat, G. R. See Jackson, C. J. Howden, O. H. See Bernstein, H. J.

Howden, P. Sco Brit. "Rema" Manufg. Co.

Howe, E. E., and Fellows, R. L., effect of manganese, nickel, and cobalt oxide on adherence and reboiling properties of a groundcoat enamel, B., 1339.

Howe, J. D. See Yearian, H. J. Howe, J. P. See Spedding, F. H. Howe, M. See Sullivan, B. Howe, P. E., and Barbella, N. G., flavour meat and meat products, B., 1125.

Howe, W. L., and Norton Co., grinding wheel, (P.), B., 347.Howe, W. T., waterproof cement, concrete,

lime-plaster, and similar lime-containing compositions, (P.), B., 349.

Howell, D. H., identification of certain gem-stone materials by their emission spectra, A., I, 484.

See also Kennard, T. G.

Howell, E. T. See Du Pont de Nemours & Co., E. I.

Howell, F. K., developments in continuous drying of staplo rayon, B., 424.

Howell, H. G., spectrum of thallium fluoride, A., I, 442.

Howell, O. R., and Jackson, A., absorption spectrum of potassium cobaltous thiocyanate, A., I, 279. Absorption spectrum of solid anhydrous cobalt chloride, A., I, 442. Available surface of cellulose, A., I, 442.

and Warue, H., transport numbers of ions in solutions of silver dodecyl sulphate, A., I, 465.

Howell, S. C., action of adrenaline in the normal human eye, A., III, 37.

Howell, S. F. See Sumner, J. B.
Howell, T., [transportable] mixing machines, primarily intended for concrete, (P.), B., 858.

Howell, W. N., and Robertson, A., furanocompounds. I. Synthesis of bergapten, A., II, 163.

Howes, N. H. [with Whellock, R. B.], semi-synthetic diet for Helix pomatia, A., III, 382.
Howes, R. T., and Brucite Processes,

neutralisation [of acid hydrocarbon oils], (P.), B., 1012. Howey, J. H., anisotropic growth of silver

crystals by condensation from vapour, A., I, 501.

Howitt, B. F., recently-isolated strain of poliomyelitic virus, A., III, 228.

Howland, A. L., occurrence of barite in the

red beds of Colorado, A., I, 51.

Howland, E. G., Payne, F. E., and Crane Packing Co., plastic packing composition, (P.), B., 812.

Howland-Shearman, C. H., cold-flow in substances, (P.), B., 739. Cold-working of materials, (P.), B., 739. Mechanical

working of substances, (P.), B., 739. Howles, F., fixation of atmospheric nitrogen, B., 341.

and Hills, B. M., water-chlorination apparatus, (P.), B., 506.

Howlett, F. S., effect of carbohydrate and of nitrogen deficiency on microsporogenesis and development of the male gametophyte in the tomato (Lycopersicum esculentum, Mill.), A., III, 48. Soil-management systems in a young Bartlett pear orchard, B., 825.

Howlett, G. W., Hall, W. E., and Egyptian Lacquer Manufg. Co., temporary protective coating [for leather shoes, etc., during

manufacture], (P.), B., 1376.

Howse, G., pigmented lacquers, B., 1238. Hoxton, L. G., and Mann, D. W., direct reading comparator for spectra, A., I,

Hoy, J. E. See Dow Chem. Co.

Hoyer, F., lining of wood distillation vessels with materials of restricted availability, B., 989.

Hoyle, F., generalised Fermi interaction, A., I, 278. Capture of orbital electrons, A., I, 488.

Hoyois, L., quantitative and qualitative separation of materials, in grains or pieces, such as minerals, coals, etc., (P.), B., 98. Washing of coal, ores, and similar materials, (P.), B., 98.

Hoyt, C. S., concentration cell measurements in physical chemistry, A., I, 379.

and Fink, C. K., constants of ebullioscopy,

A., I, 302. Hoyt, R. E. See Feinstein, J. Y.

Hoyt, S. L., and Scheil, M. A., new heat-resistant alloy, B., 791. Use of reflected polarised light in the study of inclusions in metals, B., 1356.

Hradil, G., chemistry of rock asphalt, B., 314.

Hrdlička, J., Valouch, M. A., and Zachoval, L., Debye-Sears [liquid diffraction] effect, A., I, 20. Hrdlička, M. See Dubský, J. V.

Hrubetz, M. C., water intake and bloodsugar level, A., III, 291. Blood-sugar level after administration of eserine and atropine, A., III, 391.

Blackberg, S. N., and Dotti, L. B., nembutal anæsthesia, Α., III,

136.

Hruska, J. H., viscosity index determined by passing air bubbles through oils, B.,

Hrynakowski, K., and Adamanis, F., solidliquid phase equilibria in ternary organic systems. XV. The system carbamide-urethane-phenacetin, A., I, 413.

and Smoczkiewiczowa, A., application of thermal analysis to the determination of thermal effects in binary and ternary systems. I. Specific heat of solids and liquids. II. Latent heat of fusion of solids, A., I, 406. Application of thermal analysis to determination of thermal effects in binary and ternary systems, A., I, 464.

and Staszewski, H., activity of carbonyl groups of benzil in binary systems, A., I, 137. Phase equilibria in ternary organic mixtures. XIV. Ternary system of isomerides of acetotoluidide,

A., I, 186.

and Staszewski, H. [with Bogdan, S., Jadwiga, (Fraulein) B., and Aleksandra, (Fraulein) S.], mutual reaction in three-component systems of substances with pharmacodynamic properties. I. System sulphonal-salipyrine and acetanilide, B., 286.

Hrynakowski, K., Staszewski, H., and Szmyt, M., solid-liquid equilibria in systems of organic components. Ternary systems with limited miscibility in the molten state, A., I, 308. Activity coefficients of nitrobenzene in binary systems with certain benzene derivatives, A., I, 464.

Staszewski, H., and Szulc, B., behaviour of p-anisidine in binary systems con-

taining phenols, A., II, 188.

and Szmyt, M., influence of modifications of ammonium nitrate in the threecomponent system ammonium nitratecarbamide-resorcinol, A., I, 82.

and Zochowski, A., association of certain fatty acids on basis of their molecular polarisation, A., II, 397.

Hsianglin, H. See Hohorst, G. Hsiao-hai, W. See Hohorst, G. Hsieh, C. Y., Sun, C. C., Cheng, Y. C., and Chern, K., geology of the iron deposits in

the lower Yangtze region, A., I, 537. Hsieh, P. J. See Yang, S. T.

Hsing, C. Y. See Wieland, T. Hsing, D. D. See Dold, H.

Hsinng, alkaline soil problem in China, B.,

Hsiung, S. Y. See Ping, K. Hsu, F. Y. See Bogue, J. L. Hsu, P. C., and Adolph, W. H., influence of carbohydrates on proteolytic digestion in vitro, A., III, 429. Hsu, T. C. See Shaw, D. T.

Hsü, C. F., composition of hanfangchi oil, A., III, 161.

Hsü, H. C. See Tang, Y. C. Huang, Y. T. See Chuang, C. K.

Huang-Minlon, Chinese Asarum, Asarum Blumei, Duch, "Hsi-Hsin"; constitution of a neutral component, A., II,

Hubachek, F. B., antigen for determination

of pregnancy, (P.), B., 1409.

Hubault, E., toxicity of various phenols to fresh-water fish, A., III, 264. Toxicity of hydrocarbons to fish in rivers, B., 849. Hubbard, C. R. See Garlock Packing Co.

Hubbard, D. M., determination of lead; photometric dithizone method as applied to biological material, A., III, $5\bar{0}4.$

See also Cholak, J.

Hubbard, F., relation between characteristics of blast-furnace slag and other coarse aggregates and properties of resultant concretes, B., 675.

Hubbard, J. C., and Hodge, A. H., ratio of specific heats of air, nitrogen, and carbon dioxide as a function of pressure, by the

ultrasonic method, A., I, 505. Hubbard, J. R., and Copper Corp., P., waterproofing composition and process,

(P.), B., 1330. Hubbard, R. S., and Garbutt, H. R., changes in composition of dilute buffered carbohydrate solutions produced by boiling, A., II, 51. Determination of protein in spinal fluid, A., III, 120.

and Osgood, II., protein content of extracts of various allergens, A., III,

and Russell, N. M., fructose content of spinal fluid, A., III, 341.

See also Clinton, M., jun., and Garbutt,

Hubbeling, J. D. W., and Amer. Enka Corp., [delustred] artificial silk, (P.), B.,

Hubbell, D. S., formation of atacamite by incorporation of copper powder in magnesium oxychloride compositions, A., I, 146. Inorganic cement and adhesive, B., 553.

See also Robertson Co., H. H.

Hubbell, G. E., tannery waste disposal at Rockford, Mich., B., 194.

Hubbell, R. B., Mendel, L. B., and Wakeman, A. J., new salt mixture for use in experimental diets, A., III, 472.

See also Block, R.J., and Mendel, L.B.Hubendick, E., experiences [in Sweden] with petrol-alcohol mixtures as motor fuel, B., 867.

Huber, H., sodium hydrogen tripoly-phosphate, A., I, 91. Sodium tripoly-phosphate, A., I, 319.

Hubert, J. See under Hubert & Sigmund Stahl- & Metallwarenfabr.

Hubert & Sigmund Stahl- & Metallwarenfabrik, and Géza, L., continuously-working mixing drums, (P.), B., 98.

Hubertus, R. See Agde, G.

Hubik, E.J. See Dnbil, W.J.
Hubing, G. F., blocking-layer photo-cell pyrometer, A., I, 330.

Hubler, W. G., and Martin, J. F., ore treatment at Beattie Gold Mines, Ltd., В., 48.

Hucker, G. J., mastitis. V. Presence of mastitis streptococci in mammary

tissue, A., III, 201. and Haynes, W. C., factors affecting growth of food-poisoning micrococci, B., 836.

See also Dahlberg, A. C., and Marquardt, J. C.

Huddleson, I. F., slow-drying antigen for the Brucclla rapid agglutination test, A., III, 454.

See also Hershey, A. D. Hudita, T., recrystallisation of bent

drawn aluminium wire, A., I, 553. Hudleston, L. J., intermolecular forces of normal liquids, A., I, 125.

Hudson, A. W., Woodcock, J. W., and Doak, B. W., effect of phosphatic fertilisers and superphosphate-lime mixtures on turnip-seed germination, B., 957.

Hudson, C. L., and Mudd, S., ultramicrotechnique for precipitation and agglutination reactions, A., III, 6.

See also Walker, A. M.

Hudson, C. M., Hoisington, L. E., and Royt, L. E., dielectric strengths of CCl₂F₃-air and SO₂-air mixtures, A., I. 600.

See also Parkinson, D. B. Hudson, C. S. See Hann, R. M., Jackson, E. I., Montgomery, (Miss) E. M., Purves, C. B., Richtmyer, N. K., and Roe, J. H.

Hudson, F., the corrosion problem and the engineer, B., 928, 1059. Heatconductivity of mould materials, B.,

Hudson, J. C., tests on the ageing of mildsteel wire, B., 562. Field tests on atmospheric corrosion [of steel], B., 564. Subsidiary field tests at Birmingham and Farnborough on painted and unpainted [steel] specimens, B., 565. Paint tests on iron and steel, B., 1087. Long-time [atmospheric] corrosion tests on metals, B., 1355.

and Banfield, T. A., observations on steel plates built into the barge "Cactus," B., 565.

Hudson, J. C., and Banfield, T. A., exposure tests at Gosport, B., 565. Tests on steel plates built into H.M.S. Basset, B.,

See also Hatfield, W. H.

Hudson, J. H. See Eastman Kodak Co.

Hudson, O. F. See McKeown, J. Hudson, P. C. B. See Davies, William. Hudson, R. F., mould and core protective facings at atmospheric and elevated temperatures, B., 245.

Hudson, W. See Mather & Platt, Ltd.

Hübner, H. See Verzar, F.

Huebner, W. C., [ink-]printing element,
(P.), B., 813.

Hübscher, J., simplification of the determination of the saponification value, B., 804.

Hückel, E., C.C linking in hexaphenylethane, A., I. 67. Magnetism of diradicals, A., I., 70. Substitution reactions of substituted benzenes, A., I., 224. Aromatic and unsaturated compounds; theoretical investigations of their constitution and properties, A., I, 348. Theory of unsaturated and aromatic compounds, A., I, 602; II,

Hückel, W., steric hindrance, A., I, 86. Steric factor in reactions in solutions, A., I, 622.

and Bretschneider, H., N-tripyrazolylmethane, A., II, 471.

and Doll, W., stereoisomerism of alicyclic oximes. II., A., II, 22.

and Hartmann, Kurt, stereoisomerism of isocamphanol (camphenilyl alcohol) and of ω -aminoisocamphane, A., II,

and Nerdel, F., change of molecular structure during chemical reactions. III. Reactions of bornylamine and isobornylamine with nitrous acid, A., II, 157.

Nerdel, F., and Reimer, F., esterification of alcohols, A., II, 495.

and Reimer, F., surface tension of some alcohols of the decahydronaphthalene and hydrindane series, A., I, 501.

Schlüter, R., Doll, W., and Reimer, F., stereochemistry of dicyclic ring systems. III. Stereoisomerism of hydrindane and its derivatives. IV. Hydrindanes substituted in the sixmembered ring, A., II, 409.

and Tappe, W., stereoisomeric camphenilols, A., II, 67.
Hügel, R. See Auwers, K. von.

Hüllweck, G. See Wimmer, G.

Hünnerfeld, J. See Hücker, W. Hueper, W. C. See Wiley, F. H.

Huet, A., apparatus for deviating and aspirating currents of gases and vapours,

(P.), B., 997. Hüttel, R., and Behringer, H., vegetable sterols in toads, A., III, 120. Hüttemann, F. See Rasselsteiner Eisen-

werks-Ges., A.-G.

Hüttig, G. F., reactions in the solid state. III. The active state which is passed through in reactions in which several solid substances take part, A., I, 40. Intermediate state in solid-phase re-

actions, A., I, 367. and Goerk, H., active oxides. CVI. Zinc oxides, formed by thermal decomposition of various complex zinc oxalates, as catalysts in methyl alcohol decomposition, A., I, 253.

Hüttig, G. F., and Kürchner, E. R., active oxides. CVIII. Rate of solution in various solvents of aluminium oxides formed by heating basic aluminium acetate in presence of different gases, A., I, 623.

and Schmeiser, H., active oxides. CVII. Determination of activity of zinc oxide preparations by means of the Rinmann's green reaction, A., I, 363.

Zeidler, E., and Franz, Eberhard, active oxides. CIV. "Memory" of solid materials, A., I, 257.

Hüttinger, W. See Lüers, H.

Huey, S. L., and Marlow, H. W., effect of serum-calcium and inorganic phosphate of fractions obtained $_{
m from}$ ovarian extracts, A., III, 402.

Huf, E., influence of respiratory process on absorption and potential-formation of frog's skin, A., III, 16.

Huff, C. E. See Pyle, S. I.

Huff, L. C. See Universal Oil Products

Co.

Huff, L. D. See Nielsen, J. F. Huff, W. J., Logan, L., and Lusby, O. W. purification of commercial gases at clevated temperatures. I. Elimination of organic sulphur. II. Simultaneous removal of hydrogen sulphide and organic sulphur. III. Determination of organic sulphur, B., 1154.

See also Bonney, D. T., and Jones, G. W. Huffman, C. F. Soc Bechtel, H. E., and Duncan, C. W.
Huffman, D. D. See Koppers Co. of

Delaware.

Huffman, E. H. See Bailar, J. C., jun. Huffman, H. M. See Borsook, H.

Huffman, J. Sce Pegram, G. B. Huffman, J. R., and Urey, H. C., separation of oxygen isotopes by a fractionating column, A., I, 373.

See also Urey, H. C. Huffman, O. V., antiparasitic agent [for gun cartridges], (P.), B., 190.
Hufschmitt, G. See Sartory, A.

Hug, E. See Cicardo, V. H.

Hugel, E. J., isoelectric point of beet juice, B., 173. Treatment of solutions having a colloidal and crystalloidal character and in particular sugar juices and residual liquors, (P.), B., 381. Stabilisation of grape juice, B., 967.

Hugel, G., synthetic petrol and its derivatives, B., 108.

[with Lerer, M., and Tcherkozov], structure and viscosity of [hydrocarbon] liquids, B., 11.

Huggeft, J. L. See Standard Oil Development Co.

Huggett, W. E. See Howards & Sons. Huggins, B. F. See Gaut, G. C.

Huggins, M. L., lattice energies, equilibrium distances, compressibilities, and characteristic frequencies of alkali halide crystals, A., I, 170. Internuclear distance in Te₂, A., I, 224. Synchronised oscillations in hydrogen bridges, A., I, 285. Polarity of chemical bonds, A., I, 445. Hydrogen bridges in organic compounds, A., II, 131. Huggins, W. C. See Lowry, M. W.

Hughes, A. L., photoconductivity in crystals, A., I, 115. and West, S. S., scattering of fast elec-

trons in hydrogen, A., I, 488. Hughes, A. W. McK. See Ashmore,

Hughes, E. B. See Sylvester, N. D.

Hughes, E. C. See Standard Oil Co. of Indiana

Hughes, E. D., Ingold, C. K., and Masterman, S., reaction kinetics and Walden inversion. I. Homogeneous hydrolysis and alcoholysis of β -n-octyl halides. IV. Action of silver salts in hydroxylic solvents on β -n-octyl bromide and α -phenylethyl chloride, A., II, 363.

Ingold, C. K., and Scott, A. D., mechanism of elimination reactions. I. Unimolecular olefine formation from alkyl halides in sulphur dioxide and formic acid, A., I, 467. Reaction kinetics and Walden inversion. II. Homogeneous hydrolysis, alcoholysis, and ammonolysis of a-phenylethyl halides, A., II, 363.

Ingold, C. K., and Shapiro, U. G., mechanism of elimination reactions. II. Unimolecular olefine formation from sec.-octyl halides in aqueous alcohol; a new criterion of mechanism, A., I, 467.

Le Fèvre, (Mrs.) C. G., and Le Fèvre, R. J. W., structure of some derivatives of fluorenc and fluorenone, A., II, 142.

and MacNulty, B. J., mechanism of elimination reactions. IV. Unimolecular olefine formation from tert .- amyl halides in acid and alkaline aqueous solutions, and scope of unimolecular

mechanism, A., I, 467. and Shapiro, U. G., mechanism of substitution at a saturated carbon atom. VII. Hydrolysis of isopropyl halides. X. Hydrolysis of β -n-octyl bromide,

A., I, 467. See also Bateman, L. C., Cooper, K. A.,

and Cowdrey, W. A. Hughes, (Miss) E. E., and Acree, S. F., analysis of mixtures of furfuraldchyde and methylfurfuraldehyde, A., II, 394.

Hughes, E. H., relation between refractive index and moisture content of fat and muscle of the pig, B., 182.

See also Guilbert, H. R.

Hughes, E. M. See Terrell, H. T. Hughes, J. See Saifer, A. Hughes, J. H., and Latner, A. L., chlorophyll and hamoglobin regeneration after hamorrhage, A., III, 110. Ætioporphyrin and hamoglobin regeneration after hæmorrhage, A., III, 335. Hughes, J. S., and Scott, H. M., change in

concentration of ovoglobulin in egg white during egg formation, A., III, 210. See also Aubel, C. E., Cave, H. W., and Peterson, W. J.

Hughes, J. V. See Fraser, R. G. J.

Hughes, T. F., developments in bleaching kiers, B., 231.
Hughes, T. P. See Bowden, F. P.
Hughes, W. C., and Wilson, H. N., deter-

mination of selenium in sulphur, B., 34. Hughes, W. L. See McLean, R. C.

Hughes-Mitchell Processes, Inc. See Mitchell, T. A.

Hugill, J. A. C. See Arnold, M. H. M. Huguenin, L. See Chevenard, P.

Hugues, E., and Bouffard, E., ripeness of

table grapes, B., 836. Huhn, G., stuffing-box packing, (P.), B., 198.

Huhn, O. See Girndt, O.

Huidovici, G. See Otin, C. Huizinga, W. J., relative probability of excitation of the three L levels of tung-sten as a function of the velocity of the cathode rays, A., I, 273.

Hukumoto, Y., continuous absorption spectra of some polyatomic molecules. A., I. 393.

Hulbert, H. W., and Benjamin, L. V., dry application of chlorates [weed killers], B., 171.

Hulburt, E. O. See Dawson, L. H. Hull, A. W., Burger, E. E., and Navias, L., glass-metal scals, B., 1204.

Hull, D. C. See Eastman Kodak Co. Hull, G. F., jun., pressure broadening of potassium resonance lines by argon and nitrogen, A., I, 103. Temperature shift of the potassium resonance lines, A., I, 271.

Hull, R., control of spoilage of processed fruit by Byssochlamys fulva, B., 283,

Hull, R. B., and Hicks, V., universal X-ray photogoniometer, A., I, 99.
Hull, W. See Brennan, E. A.

Hully, H. H., Brock, F. H., and Fuson, R. C., dihydro-1:4-pyrans. V. Structure of 3-cyano-derivatives, A., II,

See also Fuson, R. C.

Hulme, A. C., metabolism of nitrogen in apple-fruits, A., III, 442.

Levy, B. F. G., and Roach, W. A., injection experiment on keeping qualities of apples, B., 824.

Hulpieu, H. R. See Harger, R. N.

Hulse, R. E. See Du Pont de Nemours & Co., E. I.

Hulst, J. van, and Patent & Licensing Corp., solidification of soils, (P.), B.,

Hultgren, A., and Edström, O., special structure of cementite separating from

austenite, B., 1061. Hultou, H. F. E. See Baker, J. L.

Hultzsch, K. Seo Fischer, F. G. Hulubei, H., L emission and absorption spectra of radium; characteristic levels, A., I, 487. K Emission spectra of gallium (31) and germanium (32), A., I, 541.

Humber, T. See Eirich, F. Humboldt-Deutzmotoren Akt.-Ges., gas producers with simultaneous up and down draught, (P.), B., 14. Rotary breakers, (P.), B., 1288. Humby, A. J. D. See Reavell & Co. Hume, A. N. See Franzke, C. J. Hume, E. M., determination of vitamin-A,

A., III, 231.

Hume-Rothery, W., and Butchers, E. solubility of silver and gold in solid

magnesium, A., I, 73. Lewin, G. F., and Reynolds, P. W.,

lattice spacings of certain primary solid solutions in silver and copper, A., I, 72.

and Raynor, G. V., constitution of copper-gallium alloys in the region 18—32 at.-% gallium, A., I, Ř08.

and Reynolds, P. W., control of composition in application of the Debye-Scherrer method of X-ray crystal analysis to study of alloys, A., I, 72. Accurate determination of f.p. of alloys and a study of valency effects in certain alloys of silver, A., I, 455.

See also Reynolds, P. W.

Humfeld, H. See Lambert, E. B. Humm, W., cements for mass concrete, B.,

Hummel, F. Sce Burwell, R. L., jun.

Hummel, F. C., Hunscher, H. A., Bates, M. F., Bonner, P., Macy, I. G., and Johnston, J. A., nutritive state in metabolism of women during pregnancy, A., III, 462.

Sternberger, H. R., Hunscher, H. A., and Macy, I. G., metabolism of women during the reproductive cycle. VII. Utilisation of inorganic elements (a continuous case study of multi-para), A., III, 20.

See also Erickson, B. N., and Williams, H.~H.

Hummel, O., apparatus for mixing different or similar substances, (P.), B., 1288.

Hummelinck, C. H., purity increase in [sugar-]juice purification, B., 1391.

Humoller, F. \hat{L} ., and McManus, W. F., allomucic acid, A., II, 274.

McManus, W. F., and Austin, W. C.,
derivatives of l-allonic and l-altronic

acid. I., A., II, 49. Humphrey, A. A., dinitroresorcinol, a specific stain for iron in tissues, A., III,

Humphrey, H. A., history and development of Mond gas for industrial purposes in South Staffordshire, B., 105.

Humphrey, I. W. See Hercules Powder

Humphrey, J. W., and Viscose Co., increasing tensile properties of viscose rayon, (P.), B., 28.

Humphreys, C. J. See Meggers, W. F.

Humphreys, F. E.See Douglas, G. W. Humphreys, R. F. See More, K. R., and Watson, W. W.

Humphreys Coal & Coke Co. See Higgins, 0. A.

Humphreys & Glasgow, Ltd. See Smith, J. H.

Humphries, W. R. See Hurst, W. M. Humphriss, E. L. E., laboratory control in ice-cream manufacture, B., 387. Ice cream manufacture. II. Chemical analysis, B., 972.

Hun, (Mlle.) O. See Bourion, F. Hund, F., properties of matter at very high pressures and temperatures, A., I, 59. Symmetry properties of the forces in atomic nuclei and results for the states, particularly for nuclei up to sixteen particles, A., I, 286.

Hund, W. J., Loomis, A. G., and Lambert, S. E., treatment of wells with acids, (P.), B., 1301.

See also Rosenstein, L.

Hundeshagen, F., action of alkali chlorides on cement and concrete, B., 553. Old mortar from the abbey church of Otter-

burg in Pfalz, B., 1345.

Hundhammer, W. See Makkus, W.

Hundt, W., bleaching of cotton goods
containing metal effect threads, B., 335. Bleaching of grey cotton piecegoods with metallic effect threads (copper and brass), B., 659.

See also Baier, H. Hunger, H., preparation of anisaldehyde, B., 1308.

Hunscher, H. A. See Cooley, T. B., and Hummel, F. C.

Hunsdiecker, C., Hunsdiecker, H., and Vogt, Egon, organic chlorine and bromine derivatives, (P.), B., 118. Hunsdiecker, H. See Hnnsdiecker, C.

Hunt, C. H., and Perkins, A. E., influence of the feed of the cow on the vitamin-B₂ content of milk, A., III, 405.

Hunt, C. H., Record, P. R., and Bethke, R. M., influence of stage of maturity on chemical composition and vitamin- B_1 and B_2 content of hays, B., 837. See also Gerlaugh, P.

Hunt, D. J. See Sebrell, W. H. Hunt, F. B., Turner, R. L., and Liquid Carbonic Corp., obtaining carbon dioxide, (P.), B., 779.

Hunt, F. G., jun., detergent and polishing compound, (P.), B., 1083.

Hunt, H., Chittum, J. F., Tartar, H. V., and McClain, H. K., electrode potentials and adsorbed ionic films, A., I, 465. See also Chittum, J. F.

Hunt, H. M. See Hursthal, L. M. Hunt, J. K. See Du Pont de Nemours & Co., E. I.

Hunt, R., and Renshaw, R. R., [effects on blood pressure of] ethers of choline and allied compounds, A., III, 24.

Hunt, W. H., and Thompson, M. R., bio-assay of Strophanthus preparations, B., 728.

Hunt & Moscrop, Ltd., and Calvert, G., valves

for bleaching kiers, etc., (P.), B., 130. Hunt Pen Co., C. H., tarnish- and corrosionproof articles, (P.), B., 249. See also Lukens, H.S.

Hunter, A., and Pearse, R. W. B., heavycurrent discharge tube, A., I, 100.

Hunter, Andrew, and Pettigrew, J. B., manometric method for enzymic determination of arginine, A., III, 139.

Hunter, A. S. See Du Pont de Nemours & Co., E. I.

Hunter, B. F., railway lubricants, B., 871. Hunter, C. A. See Feldman, Max.

Hunter, D., industrial toxicology of to-day, B., 92. Prevention of disease in in-dustry, B., 504.

Hunter, F. R., effect of prolonged exposures to lack of oxygen on permeability of the erythrocyte, A., III, 449. Effect of lack of oxygen on cell permeability, A., III, 474.

Hunter, F. T., drug or protein allergy as cause of agranulocytosis and certain types of purpura, A., III, 121.

Hunter, G., and Hlynka, I., synthesis of

4-(or 5-)carbamidoglyoxaline, A., II, 211. Preparation of purines and pyrimidines from nucleic acid, A., II, 215.

Hunter, G. J. E. See Whitehead, H. R.Hunter, H., aspects of malting-barley breeding in Great Britain, B., 957.

Hunter, J. E. Sec Murphy, R. R. Hunter, J. H. See Jordan, H. V.

Hunter, L., azo-group as a chelating group.
II. Structure of diazoamino-compounds, A., II, 144.

See also Chaplin, H. O.
Huuter, R. F., Qureishy, A. M., and
Samuel, R., chemical linking. II. Absorption spectra of some dipole association products, A., I, 14.

and Wali, M. A., unsaturation and tautomeric mobility of heterocyclic com-pounds. X. Effect of ethoxyl ions on methylation of 5-substituted 1-anilinobenzthiazoles, and the ultra-violet absorption spectra of 5-bromo-l-anilinobenzthiazole and of its N-methyl derivatives, A., II, 472.

See also Ali, A., Desai, R. D., and Hasan, C. Hunter, R. S., determining gloss, B., 401. Hunter, T. G. See Bathi, M., Imperial

Chem. Industries, and Strang, L. C. Hunter, W. C., and Snyder, G. A. C., hepatic damage in dogs by feeding cinchophen, A., III, 27.

Huntingdon, E., and Winslow, C. E. A., cell size and metabolic activity at various phases of the bacterial culture cycle, A., ÎII, 317.

Huntington, R. L. See Patterson, W. C. Hunyadi, L. V., and Koch, Jenō, oil-regenerating plant, (P.), B., 201. Huppke, W. F. See Frey, F. E., and

Guyer, J. A. Hurd, C. B., and Fiedler, W., jun., analysis of sodium acetate, B., 435.

Fiedler, W., jun., and Raymond, C. L., silicic acid gels. VII. Effect of the sodasilica ratio on the time of set, A., I, 461.

Hurd, C. D., and Blunck, F. H., pyrolysis of isobutene at very low conversions, A., II, 479.

and Christ, R. E., rearrangement of acetylenylcarbinols, A., II, 98. and Filachione, E. M., preparation and

pyrolysis of triphenylmethyl ethers of complex function, A., II, 496.

Mack, C. O., Filachione, E. M., and Sowden, J. C., triphenylmethyl ethers of glycerol and glycerol derivatives, A., II, 480.

and McNamee, R. W., pentenyl-, hexenyl-, and heptenyl-resorcinols, A., II, 98.

and Schmerling, L., rearrangement of aryl allyl ethers, A., II, 97. Alkenyl derivatives of fluorescein, A., II, 111.

and Webb, C. N., effect of halogen substituents on rearrangement of aryl allyl ethers. II. Ethers which behave

abnormally, A., II, 14.
and Williams, J. W., rearrangements of
a-propylcrotyl chloride and phenyl a-propylerotyl ether, A., II, 43.

and Yarnall, W. A., pyrolysis of 2:4:6-trialkylphenyl allyl ethers, A., II,

Hurd, L. C., and Wisconsin Alumni Res. Foundation, toxic antifouling material, (P.), B., 1242.

Hurd-Karrer, A. M., rubidium and strontium toxicity to plants inhibited by potassium and calcium respectively, A., III, 444. Selenium absorption by crop plants as related to their sulphur requirement, B., 956.

Huri. See Levy-Bruhl, M.

Hurlburt, E, N., and Taylor Instrument Cos.,

hydrometer, (P.), B., 306. Hurlbut, C. S., jun., X-ray determination of silica minerals in submicroscopic intergrowths, A., I, 102. New phosphate, bermanite, occurring with triplite in Arizona, A., I, 154. Synadelphite and plumbosynadelphite, A., I, 430.

Hurlbut, JV. W., modifying an unusual [waterworks] filter plant to operate successfully, B., 298.

Hurley, (Miss) D. E. Sce Algar, J.

Hurley, F. H., jun., borax as an acidimetric standard. II., A., I, 374. Calibration of weights, A., I, 379. See also Scott, A. F.

Hurley, T. F. See Barber, A. T. Hurn, M. See Magath, T. Hurst, C. See Booth, E. T.

Hurst, D. G., and Walke, H., induced radioactivity of potassium, A., I, 439.

Hurst, J. E., heat treatment of cast iron, B., 789. Influence of silicon, phosphorus, and manganese on nitrogenhardening cast iron, B., 789.

See also Bradley & Foster, and Rowden,

Hurst, W. M., Fulton, F. D., Humphries, W. R., and Leukel, R. W., equipment for applying dust fungicides to seed grain,

Hurter, H. See Aluminium Ind. Akt.-Ges., and Zeerleder, A. von.

Hurxthal, L. M., and Hunt, H. M., chemical relationships of blood-cholesterol: cholesterol metabolism, A., III, 384.

Husa, W. J., and Fehder, P., drug extraction. XI. Extraction of jalap. XII. Effect of variation in proportion of moistening liquid on percolation of jalap. XIII. Extraction of Ipomaa, B., 618, 728, 839. and Jones, G. R., drug extraction. X.

Swelling of powdered drugs in liquids,

B., 496.

Husain, S. See Rao, K. R. Husemann, E. See Schulz, G. V., and

Staudinger, H. Husimi, K. See Kikuchi, Seishi. Hussain, M. See Desai, R. D.

Husser, G. D. See Lucia, S. P.
Hussey, A. V., applications of aluminous cement and its influence on concrete construction, B., 243. Aluminous cement as bond for refractory concretes, B., 243.

Husson, A. See Latarjet, R. Hussong, R. V. See Sherman, J. M. Husted, D. R. See Wolfrom, M. L.

Huston, R. C., and Hedrick, G. W., condensation of tertiary heptyl alcohols with phenol in presence of aluminium chloride, A., II, 494.

and Michigan State Board of Agriculture, alkylphenols, (P.), B., 1023.

Husz, B., spraying fruit trees, B., 824. Huszak, S., peroxidase systems of plants, A., III, 353.

Hutchings, I. J. See Waksman, S. A. Hutchings, T. B., relation of phosphorus to growth, nodulation, and composition of soya beans, B., 168.

Hutchins, R. E. See Snipes, B. T. Hutchins, W. C., resistance welding improved by thyraton control, B., 794. Hutchins, W. D. [with Simpson, R. M.],

acorn oil, B., 940.

Hutchinson, A. H., polygonal presentation of polyphase phenomena, A., I, 101. Hutchinson, H. M. See Distillers Co.

Hutchinson, M. H., and Sherwood, T. K., liquid film in gas absorption, A., I, 458. Hutchinson, R., recovering sand from mix-

tures of sand and water, (P.), B., 1057. and Newbold, J. A., purification of

silica, (P.), B., 241.

and Reynolds, W. H., purification of silica [sand], (P.), B., 346.

Hutchison, W. V., moulding of [thermo-

plastic] sheet material, (P.), B., 1243. Hutchison, W. K. See Gas Light & Coke Co. Hutchisson, E. See Ballard, J. W. Huthnance, S. L. See Bartlett, S.

Hutino, K. See Sakurada, I.
Hutine, S. H. See Cooper, F. S.
Hutson, J. M. See Arnold, M. H. M.
Huttar, J. C. See Sharp, P. F.
Hutinger, C. A., and Acme Rayon Corp.,

spinning of rayon thread, (P.), B., 1192. Hutton, C. O., occurrence of pumpellyite in New Zealand, A., I, 433.

Hutton, D. See Dn Pont de Nemours & Co., E. I.

Hutton, H. S., protection of distribution systems by correction of water quality, B., 505.

Hutton, J. G., and Strickland, C., flax, B.,

Hutton, R. S., refractories, B., 913.

See also Franke, K. W.

Hutz, C. E. See Richards, W. T. Huxham, T. S. See Bell Telephone Labs. Huxley, L. G. H., motions of electrons in gases in electric and magnetic fields, A., I, 159. Dependence of mobility of ions in pure gases on temperature, A., I, 160. Motions of electrons in magnetio fields and alternating electric fields, A., I, 209.

Huyck, A. B. See Pflucke, F. J. Hveding, J. A., and Strømme, L. C., electron diffraction in germanium iodide and stannic iodide vapour, A., I, 555.

Hvidberg, I., rapid investigations of samples of bituminous [road] surfacings, B., 1055.

Hwang, S. L., and Tsein, S. P., determination of nitrogen, phosphorus, and potassium in organic fertilisers by a

modified Kjeldahl method, B., 1250. Hyatt, J. B., chemical characteristics of New Zealand grapefruit, B., 389.

Hyde, J. F., and Corning Glass Works, joining or cementing glass building units,

(P.), B., 1053. Hyde, R. W. See Lloyd, R. L. Hyden, W. L. See Charch, W. H.

Hydrawerk Akt.-Ges., and Nauk, G., [dry] electrolytic condensers, (P.), B.,

Hydro-Humus Corporation of America. See Doe, W. B.

Foundation, Hydrocarbon Loughrey, C. T.

Hydrotator Co. See Remiek, W. L. Hygienic Wire Works, Ltd., and Dowdall,

J. T., welding wires, etc., (P.), B., 1229. Corporation. Hygrade Sylvania Marsden, C. P.

Hykešová, D. E., and Reřábek, J., mutual action of thyroxine and cocaine in tho

animal body, A., III, 438. Hyland, J. L. Sec Claassen, A. A.

Hylleraas, E. A., calculation of transition probabilities in helium, A., I, 441. Specific oscillations of tetrahedral molecules, A., I, 552. Binding forces between elementary nuclear particles, A., I,

Hyman, J., Ayers, G. W., jun., and Gasoline Antioxidant Co., treatment of hydrocarbon motor fuels, (P.), B., 755.

Hyman, J. W. See Wadsworth, A. Hynes, J., "take-all" of wheat, B., 1105. Hynes, W. A., and Yanowski, L. K., application of salts of complex cations to the microscopical detection of anions. I. Hexamminocobaltic chloride (luteo-cobaltammine chloride), A., I, 579.

See also Malko, M. G., and Winkley, J. H.

Hyslop, J. F., testing of [glass-]tank blocks, B., 439.

Hyve, L., purification [affination] of sugar, (P.), B., 276.

I.

I.C.I. See under Imperial Chem. Industries. *I. G. Farbenindustrie Akt.-Ges., acetaldehyde from gases containing acetylene, (P.), B., 326. Acetylene, (P.), B., 1010. *I. G. Farbenindustrie Akt.-Ges.-continued. Addition products of acetylene and its hydrocarbon substitutiom products, (P.), B., 326. Acridine derivatives, (P.), B., 842. Salts of acridinium bases, (P.), B., 23. Halogen-substituted alcohols, (P.), B., 648. Aldehydes, (P.), B., 761. Nitrogenous aromatic aldehydes, (P.), B., 120. Alkali nitrates, (P.), B., 237, 907. Alkali peroxides, (P.), B., 237. 907. Alkali peroxides, (P.), B., 237. Alkali sulphides, (P.), B., 667. Alkaline liquors or salt solutions, (P.), B., 134. Aqueous solutions of addition compounds of alkylacridinium salts with heavy-metal salts, (P.), B., 89. Alkyl- (or cycloalkyl-) amino - [α-] 3: 4-dihydroxyphenylbutanols useful as therapeutic agents, (P.), B., 287. Alkylene imines, (P.), B., 418. Alkylene sulphides, (P.), B., 324. Alkyl halides and unsaturated organic compounds, (P.), B., 325. 4-Alkyl-5-hydroxyalkylthiazoles, (P.), B., 121. py-C-Alkyl-1(N): 2-pyrazoloanthraquinones, (P.), B., 1180. Articles [permanent mould castings] made from aluminium alloys, (P.), B., 252. Amines and amides, (P.), B., 216. Amines containing two hydroxyalkylamino-groups, (P.), B., 326. Acylated amines, (P.), B., 215. Acylated aromatic amines containing the Acylated aromatic amines containing the trichloromethyl group, (P.), B., 327. Aromatic amines containing the trifluoromethyl group, (P.), B., 327. Aminoalcohols, (P.), B., 288. N-Aminoalkylamides [local anæsthetics], (P.), B., 327. N-Aminoalkylanthranilic acid alkyl esters [local anæsthetics], (P.), B., 327. Derivatives of amisohoromethylanics Derivatives of aminobenzenesulphonic acid amides, (P.), B., 1269. Aminocarboxylic acids of capillary action, (P.), B., 650. Aminocarboxylic acid nitriles and aminocarboxylic acids, (P.), B., 326. Amino-compounds, (P.), B., 878. Amino-methylnaphthalencsulphonic acids, (P.), B., 420. 6-Amino-2-naphthol-3-carboxylic acid, (P.), B., 421. 2-Amino-quinizarin and substitution products thereof, (P.), B., 329. Substituted 3aminopyrenes, (P.), B., 1314. Cyclic aminosulphonic acid amide compounds, (P.), B., 1269. Acid aminotriarylmethane dyes, (P.), B., 1183. ternary ammonium bases [textile assistants], (P.), B., 215. Manufacture and recovery of ammonium chloride and sodium bicarbonate, (P.), B., 437. Quaternary ammonium compounds, (P.), B., 215, 326. Quaternary ammonium compounds [wetting agents], (P.), B., 526. Quaternary ammonium compounds [and betaines; textile assistants], (P.), B., 650. Anæsthetics, (P.), B., 980. [Anodes for] electrolytic production of alkaline lyes and sulphuric acid, (P.), B., 1074. Anthraquinone derivatives [acid wool dyes], (P.), B., 330. Anthraquinone derivatives [wool dyes], (P.), B., 886. Anthraquinone dyes, (P.), B., 763. Aromatic compounds containing fluorine in the side-chain, (P.), B., 527. Recovery of aromatic compounds from hydrocarbons, (P.), B., 215. Arsenobenzenemonosulphoxylates, (P.), B., 1272. Arylides of 2:3-hydroxynaphthoic acid and of azo-dyes therefrom, (P.), B., 1316. Stable solutions of l-ascorbic acid or other 2:3-ene-diols of a 1:4-lactone of

*I. G. Farbenindustrie Akt.-Ges.—continued. the sugar series, (P.), B., 1268. ing up of asphalts or substances consisting of or containing asphalt-like materials, (P.), B., 1010. Compounds of the azaphenanthrene series, (P.), B., 530. Azo-dyes, (P.), B., 121, 531, 532, 652, 762, 882, 883, 1026, 1181. Azodyes containing metals, (P.), B., 222, 532, 1027. Azo-dyes capable of forming metallic complex compounds, (P.), B., 222. Azo-dyes [for acetate silk, (P.), B., 883, 1316. Azo-dyes [for acetate silk, resins, or wool], (P.), B., 883. Azo-dyes for wool, (P.), B., 1316. Azo-dyes for wool, (P.), B., 1316. Azo-dyes for wool, (P.), B., 1316. dyes on the fibre, (P.), B., 662. dyes of the pyrazolone series, (P.), B., 884. [Acid] azo-dyes, (P.), B., 882. [Acid] azo-dyes [for wool], (P.), B., 221. [Blue acid] azo-dyes [for wool], (P.), B., 221. [Chromable] azo-dyes, (P.), B., [Chrome] azo-dyes, (P.), B., 883. Cupriferous [azo]-dyes [for leather], (P.), B., 329. Diazotising azo-dyes, (P.), B., 884. Diazotisable azo-dyes, (P.), B., 884. Diazotisanie azo-cyce, (..., 884. Dischargeable substantive azo-dyes, (P.), B., 882. Insoluble azo-dyes [for acetate silk], (P.), B., 883. [Oilsoluble] azo-dyes, (P.), B., 884. Watersoluble] azo-dyes, (P.), B., 884. Water-insoluble azo-dyes, (P.), B., 221, 222, 531, 882. Water-insoluble azo-dyes [pigments and ice colours], (P.), B., 222, 883. Water-insoluble azo-dyes and printing preparations, (P.), B., 652. Water-insoluble azo-dyes [for acetate silk], (P.), B., 329, 883. [Water-insoluble] azo-dyes [for lacquers], (P.), B., 221. Water-soluble azo-dyes, (P.), B., 531. Water-lable soluble azo-dyes [for cotton, viscose silk, leather, paper, etc.], (P.), B., 330. Water-soluble azo-dyes [for leather], (P.), B., 1027.

Benzaldehydes containing trifluoromethyl groups, (P.), B., 761. Benzene derivatives containing halogenated methyl groups, (P.), B., 759. Compounds of the benzfluoranthene [1:10-phenylenephenanthrene] series, (P.), B., 215. [Therapeutic] bismuth salts, (P.), B., 89, 291. Treatment of boiler feedwater for preventing salt incrustation of turbine blades, (P.), B., 630. Bromopyrene, (P.), B., 327. Recovery of isobutylene from hydrocarbon mixtures containing same (P.) B. 412

containing same, (P.), B., 412.

Capillary-active carboxylic acid amides, (P.), B., 759. Capillary-active substances and their application, (P.), B., 120. Apparatus for manufacture of carbon black, (P.), B., 409. Carbon compounds of high mol. wt. [dyes, etc.], (P.), B., 1180. Separation of carbon dioxide and hydrogen sulphide from ammonia, (P.), B., 135. Reaction of oxides of carbon with hydrogen, (P.), B., 208. Apparatus for conversion of oxides of carbon with hydrogen, (P.), B., 1011. Carboxylic acids containing free carboxyl and their salts [textile assistants], (P.), B., 760. Carboxylic acid amides derived from aza-compounds, (P.), B., 530, 880. Carboxylic acid amides and nitrogenous condensation products, (P.), B., 761. Aromatic carboxylic acid chlorides, (P.), B., 651. Unsaturated aliphatic carboxylic acid nitriles, (P.), B., 419. Catalytic reactions [with carbonaceous materials],

*I. G. Farbenindnstrie Akt.-Ges.—continued. (P.), B., 1300. Imparting hydrophobic properties to cellulose fibres, (P.), B., 539, 775, 1331. Treatment of cellulose fibres, (P.), B., 334. Threads, fabrics, etc. of cellulose or cellulose hydrate, (P.), B., 229. Improvement of cellulosic materials, (P.), B., 775. Cement mortars or concrete, (P.), B., 244. Carrying out chemical reactions and extraction processes, (P.), B., 301. Chlorinated carboxylic acid esters, (P.), B., 326. Chlorinated ethyl and vinyl ketones, (P.), B., 759. Chlorination of methylaromatic compounds, (P.), B., 650. Chlorides of polycarboxylic acids, (P.), Chrysenemonosulphonio acid, (P.), B., 420. Chrysenemonosulphonio acid, (P.), B., 420. 22. Circulation of gases in processes for production of hydrocarbons by heattreatment of compounds of carbon with hydrogenating gases under pressure, (P.), B., 1009. [Anticorrosive] coating compositions, (P.), B., 1375. Treatment of finely-granulated colloidal or plastic materials, (P.), B., 303. Colouring matter compositions, (P.), B., 225. Columns containing filler bodies and adapted for distributing liquids passing therethrough, (P.), B., 305. Compositions comprising halogen-containing film-forming materials, (P.), B., 1372. Condensation products, (P.), B., 219, 1178, 1315. Condensation products [and resins], (P.), B., 1312. Condensation products containing nitrogen, (P.), B., 219. Nitrogenous condensation products of high mol. wt., (P.), B., 1178. Condensation products containing nitrogen, phosphorus, or sulphur [wetting agents], (P.), B., 650. After-treatment of condensation products containing sulphur, (P.), B., 1089. Condensation products [lacquers, etc.], (P.), B., 472. Condensation products of the anthraquinonc series, (P.), B., 761. Condensation products from [hydr]oxyand amino-derivatives of pyrene and chrysene, (P.), B., 527. Condensation products from substitution products of 2:3-hydroxynaphthoic acid, (P.), B., 879. Polycyclic condensation products, (P.), B., 1177. Water-soluble condensation products, (P.), B., 22. Water-soluble condensation products [tanning agents], (P.), B., 1381. Water-soluble phenolic condensation products [tanning agents], (P.), B., 1176. [Water-soluble resinous] condensation products [textile assistants], (P.), B., 1176. Conversion products from cellulose or cellulosic materials, (P.), B., 234. Copper phthalocyanines, (P.), B., 224. Cores for electromagnets, etc., made from powdered materials, (P.), B., 1360. Compounds of the type of crotylidenecyanoaeetic acid [α -cyano- $\Delta^{\alpha\gamma}$ -hexadienoic acid], (P.), B., 525. Cryolite, (P.), B., 908. iso-Cyanates [carbimides], (P.), B., 418. Cyanohydrins, (P.), B., 327.

Damask effects on vegetable and artificial fibrous materials, (P.), B., 1329. Detinning substances, in particular waste, containing tin, (P.), B., 1226. Diacetyl, (P.), B., 326. Diamides and imides of [aromatic] dicarboxylic acids, (P.), B., 120. Diazoamino-compounds

*I. G. Farbenindustrie Akt.-Ges.—continued. soluble in water, (P.), B., 650. N-Dihydroazines of the anthraquinone series, (P.), B., 1030. Dihydroxystilbenedi-carboxylic acid, (P.), B., 1314. 2:6-Di-methylnaphthalene 1 - sulphonic acid, (P.), B., 419. 2:6-Dimethylnaphthalene-7-sulphonic acid, (P.), B., 419. 2:6-Dimethylnaphthalene-8-sulphonie (P.), B., 419. Complex compounds of 1:3-dimethylxanthine, (P.), B., 3:4'-Dinitro-4-aminodiphenylamine and of azo-dyes therefrom [pigments and ice colours], (P.), B., 878. 3:4'-Dinitro-4amino-6-methyldiphenylamine, (P.), B., 119. Substitution products of diphenylene oxide, (P.), B., 1315. Disazo-dyes [pigments and ice colours], (P.), B., 884. Asymmetrical disazo-dyes, (P.), B., 884. Dis- and tris-azo dyes, (P.), B., 330. Dispersions of solid carbonaceous matter in oil, (P.), B., 207. Dyes, (P.), B., 765, 1184. Dyes containing metal, (P.), B., 765. Condensation products [dyes for acetate silk], (P.), B., 225. Dyes of the anthracene series, (P.), B., 886. Compounds [dyes and intermediates] of the anthracene series, (P.), B., 653. Dyes of the dioxazine series, (P.), B., 122. Condensation products [dyes] of the diphenylamino series, (P.), B., 885. Dyes [of the phthalone series] capable of being chromed, and intermediate therefor, (P.), B., 1317. Dyes soluble in water [for leather], (P.), B., 223. Acid dyes of the anthraquinone series, (P.), B., 223, 885. [Acid] dyes and intermediate products of the anthraquinone series, (P.), B., 885. [Chromable acid] dyes of the anthraquinone series, (P.), B., 122. Dye compositions [for colouring organic solvents, lacquers, or waxes], (P.), B., 890. Dye mixtures [for acetate silk], (P.), B., 122. Mixtures of dyes and dyeing or printing therewith, (P.), B., 1028. Dye preparations and printing pastes, (P.), B., 899. Dye printing pastes, (P.), B., 900. Dye sulphonic acids, (P.), B., 225. Intermediate products for dyes, (P.), B., 1175. Dyed artificial masses from regenerated cellulose, (P.), B., 774. Dyeing with azo-dyes, (P.), B., 1329. Dyeing of cellulose acetate artificial silk, (P.), B., 31. Dyeing of cellulose esters with azodyes, (P.), B., 774. Dyeing of cellulosic fibrous materials, (P.), B., 774. Dyeing of leather, (P.), B., 232, 952. Dyeing of textiles, (P.), B., 538. Dyeings, (P.), B., 774. Dyeings and printings, (P.), B., 774. Fast dyeings, (P.), B., 232. Improving fastness of dyeings, (P.), B.,

Electrical condensers, (P.), B., 460. Electrolytic production of protective layers on magnesium and magnesiumbase alloys, (P.), B., 934. Ethyl chloride, (P.), B., 1169.

Fabrics with non-crease effects, (P.), B., 233. Felt [containing artificial fibres], (P.), B., 228. Granular fertilisers, (P.), B., 604. Artificial fibres suitable for admixture with wool, and dyeing of such mixed goods, (P.), B., 1323. Improved artificial fibres, (P.), B., 1197. Filters and other apparatus containing porous parts, (P.), B., 99. Fluorine compounds [containing rubber], (P.), B.,

*I. G. Farbenindustrie Akt.-Ges.—continued. Fluorine compounds of aliphatic hydrocarbons, (P.), B., 757. Fluoro-hydrocarbons, (P.), B., 1169. Preparations for use in production of foam, (P.), B., 402. Colouring of food-stuffs, (P.), B., 727.

Gases rich in nitrogen and free from oxides of nitrogen, (P.), B., 1203. Cooling of gases, in particular those having a high content of water vapour, (P.), B., 512. Apparatus for measuring and registering density of gases, (P.), B., 512. Fine dispersion of gases in liquids, (P.), B., 307. Removal of weak gaseous acids from gases, (P.), B., 857, 1290. Washing of gases, (P.), B., 402. Wet purification of gases, especially coal-distillation gases, (P.), B., 519. Obtaining rare gases, (P.), B., 344. Photo-luminescent glass, (P.), B., 346. Splin-

terless glass, (P.), B., 1342. Halogenoalkylamines, (P.), B., 1021. Halogenoalkylamines or their salts, (P.), B., 119. 3:4:5:6-Halogeno - 2 - amino-lhydroxybenzenes, (P.), B., 420. Halogeno-nitro-alcohols, (P.), B., 1311. Hardening teeth of toothed wheels by a flame, (P.), B., 935. Heat exchangers, (P.), B., 301. Heterocyclic condensation products, (P.), B., 1025. Improving hides and skins, (P.), B., 69. Hydrocarbons, (P.), B., 644. Hydrocarbons and their derivatives from mixtures of hydrogen and oxides of carbon, (P.), B., 757. Hydrocarbons and their derivatives containing oxygen from carbon monoxide and hydrogen, (P.), B., 1169. Oxidation of hydrocarbons, (P.), B., 417. Recovery of hydrocarbons from gases, (P.), B., 319. Thermal treatment of hydrocarbons, (P.), B., 1011. Production and recovery of light hydrocarbons from gas mixtures produced in heat treatment of carbonaceous materials at elevated temperatures, (P.), B., 520. Liquid hydrocarbons, especially those of low b.p., from gaseous hydrocarbons, (P.), B., 520. Low-boiling liquid hydrocarbons from gases obtained in dry distillation of fuels, (P.), B., 1305. Unsaturated hydrocarbons, (P.), B., 529, 1169. Apparatus for manufacture of hydrogen from gaseous or vaporous hydrocarbons, (P.), B., 208. Addition of hydrogen halides to arylethylenes, (P.), B., 527. Hydrogen peroxide, (P.), B., 669. Partly hydrogenated compounds containing several nuclei, (P.), B., 1024. Hydroxyalkylaminoanthraquinones, (P.), B., 1027. N-Substituted derivatives of 1:4-diaminoanthraquinone [dyes], (P.), B., 1027. [Hydr]oxyarylaminoanthracene derivatives, (P.), B., 217. o-[Hydr]oxyazo-dye, (P.), B., 532. [Chromable] o-hydroxyazo-dyes, (P.), B., 884. Hydroxycarbazolemonosulphonic acids, (P.), B., 220. Hydroxycarboxylic acid, (P.), B., 218. Hydroxycoumaran]-carboxylic acids and amides derived therefrom, (P.), B., 421. 3-Hydroxydiphenylene oxide and substitution products thereof, (P.), B., 1177. 4-Hydroxynaphthostyril and its substitution products, (P.), B., 880. 4-Hydroxy-pyrene, (P.), B., 22. 3-Hydroxy-1:2:3:4tetrahydroquinoline derivatives, (P.), B.,

*I. G. Farbenindustrie Akt.-Ges.—continued. Ice, (P.), B., 991. Iminopolymethine dyes, (P.), B., 764. Indigoid dyes of the pyrene series and of intermediates therefor, (P.), B., 887. Inhaling apparatus, (P.), B., 1140. Insulating compositions, (P.), B., 510. Complex iron compounds [tanning agents], (P.), B., 1095. Magnetisable iron-nickel alloys, (P.), B., 359, 455.

Joints, flanged, in particular for highpressure conduits, (P.), B., 1150.

β-Keto-acetals, (P.), B., 759. Ketones containing several unsaturated linkings, (P.), B., 215. Ketones of polycyclic hydroaromatic compounds, (P.), B., 842. Lacquers or varnishes, (P.), B., 264. "Lead" for writing purposes, (P.), B., 1375. Stabilisation of lead tetraethyl and anti-knock mixtures containing it, (P.), B., 211, 412. Fast brown leather dyes, (P.). B., 225. [Tanned] leather, (P.), B., 1247. Water-soluble leucocompounds, (P.), B., 530. Light filters, (P.), B., 189, 500. Agents for improving lubricants, (P.), B., 1166. High-quality

lubricating oils, (P.), B., 756.

Magnesium, (P.), B., 1361. Magnesium by thermal reduction of magnesiferous raw materials, (P.), B., 1072. Continuous production of metallic magnesium by thermal reduction, (P.), B., 1072. Electrolytic production of magnesium, (P.), B., 1361. Recovery of metallic magnesium, (P.), B., 1361. Remelting and refining magnesium and light-metal alloys containing magnesium, (P.), B., Heat treatment of magnesium alloys susceptible to precipitation-hardening, (P.), B., 252. Heat-treatment of light-metal alloys containing magnesium, (P.), B., 53. Refining of magnesium and its alloys, (P.), B., 458. Welding of magnesium and its alloys, (P.), B., 934. Electrothermal reduction of magnesiferous raw materials, (P.), B., 1228. Artificial masses, (P.), B., 1373. Materials containing bituminous substances, (P.), B., 1346. Materials resembling crêpe, (P.), B., 1332. Mercerisation of vegetable fibres, (P.), B., 31. Hardening surfaces of metal articles, (P.), B., 356, 455. Metal carbonyls practically free from sulphur, (P.), B., 909. Methine and polymethine dyes, (P.), B., 1032. Apparatus for preparatory processes such as mixing or kneading, (P.), B., 511. Motor fuels, (P.), B., 520. Moulded or shaped articles of fabric, (P.), B., 1332. Naphthalene derivatives, (P.), B., 419.

Derivatives of o-nitroanilines and o-phenylenediamines, (P.), B., 420. 5-Nitro-1-ehloromethylnaphthalene, (P.), B., 1313. 3-(or 5-)Nitro-2:4-dimethylbenzyl chloride, (P.), B., 1313. Quaternary nitrogen compounds, (P.), B., 878. Nitrogenous condensation products [wetting, etc., agents], (P.), B., 326. Nitrogenous condensation products of the anthrone series, (P.), B., 1030. Nitrogenous products [from $a\beta$ -alkyleneimines, (P.), B., 1022.

Oil of high b.p. suitable as a heating

oil or motor fuel, (P.), B., 1014. Heavy oils poor in, or free from, asphalt, (P.), B., 754. Olefines, (P.), B., 757. Olefines from gaseous or vaporous saturated hydrocarbons, (P.), B., 523. Conversion *I. G. Farbenindustrie Akt.-Ges.—continued. of olefines into products of high mol. wt., (P.), B., 1309. Organic gold, silver, and bismuth compounds, (P.), B., 730. Organic mercury-silicon compounds, (P.), B., 843. Oxazole dyes of the anthraquinone series, (P.), B., 224. Oxygen-generating apparatus, (P.), B., 1337. py-3-Oxytetrahydrohydroxy-naphthoquinolines [3-hydroxy-1:2:3:4-tetrahydro-7':8'-benzquinolines], (P.), B., 1179.

Packing and fluid-tightening materials, (P.), B., 658. Paraffin hydrocarbons from earbon monoxide and hydrogen, (P.), B., 209. Concentrated phosphoric acid, (P.), B., 1336. Photographic colour development and developers, (P.), B., 984. Photographic desensitisers, (P.), B., 501, 732. Photographic developers, (P.), B., 395. Photographic developers and fixing agents, (P.), B., 1277. Photographic development, (P.), B., 395. Apparatus for photographic [daylight] development [of X-ray film-packs], (P.), B., 395. Sensitising photographic emulsions and manufacture of dyes therefor, (P.), B., 293. Photographic silver halide emulsions, (P.), B., 845. Polychrome pictures from photographic silver halido emulsions. (P.), B., 294. Photographic exposure processes, (P.), B., 91. Photographic material for colour photography, (P.), B., 293. Photographic materials, (P.), B., 983. Light-sensitive photographic material, (P.), B., 845. Photographic [optical] copying on lenticular films, (P.), B., 845. Coloured photographic pictures, (P.), B., 91, 502, 732. Multicolour photographic pictures, (P.), B., 1410. Photographic printing, (P.), B., 1205. 395. Colour-photographic printing, (P.), B., 294. Colour photography, (P.), B., 395, 1277, 1410. Filter-layers for colour photography, (P.), B., 1276. Light-sensitive material for colour photography, (P.), B., 500. Phthalocyanines, (P.), B., 889, 1184. [Phthalocyanine] colour lakes, (P.), B., 264, 888. [Phthalocyanine] dyes, (P.), B., 224, 422, 1031, 1183, 1318. Improvement of properties of phthalocyanine dyes, (P.), B., 888. [Green] dyes of the phthalocyanine series, (P.), B., 1183. Pigment dyes [phthalocyanines], (P.), B., 888. [Green] pigment dyes of the phthalocyanine series, (P.), B., 1183. Physiologically active substance from the urine of women, (P.), B., 291. Manufacture and application of coloured pigments, (P.), B., 1242. [Metallic phthalocyanine] highly dispersed pigments, (P.), B., 1375. Pigments containing titanium, (P.), B., 264. Piston pumps for pauseless, uniform movement of liquids or gases, (P.), B., 100. Agents for plant protection, (P.), B., 274. Plastic masses, (P.), B., 468. Plastic masses [from vinyl esters], (P.), B., 1239. [Plastic] polymerisation products [of halogenovinyl compounds], (P.), B., 812. Polyamino-1:9-anthrapyrimidines [dyes], (P.), B., 764. Polyazodyes, (P.), B., 652, 653, 1181. Polyazodyes [for leather], (P.), B., 885. [Black poly]azodyes [for leather], (P.), B., 885. [Brown to black] polyazodyes [for leather, (P.), B., 223. Polycyclic arom*I. G. Farbenindustrie Akt.-Ges.—continued. atic aldehydes and carboxylic acids, (P.), B., 1315. Polycyclic compounds from chrysene, (P.), B., 529. Manufacture and application of polyglycol ethers [textile assistants], (P.), B., 1172. Polyhydroxy-compounds of the dibenzanthrone series, (P.), B., 763. Solutions of polymeric acrylic acid nitrile, (P.), B., 419. Polymerisation products, (P.), B., 418, 946, 1373. Polymerisation products of β-chloro-Δαγ-butadiene, (P.), B., 1239. Polymerisation products of β -chloro- $\alpha\gamma$ -butadienes, (P.), B., 700. Solutions of polymerisation products, (P.), B., 326. Interpolymerisation products, (P.), B., 946. [Polymethine] dyes, (P.), B., 1031, 1184. Polymethine dyes [for acetate silk], (P.), B., 888. [Acid] polymethine dyes, (P.), B., 224. Recovery of polynuclear compounds, (P.), B., 1174. Polyvinyl derivatives containing nitrogen, (P.), B., 470. Printing or padding with vat dyes, (P.), B., 1329. Printing from a lenticular film on to another lenticular film, (P.), B., 189.

Quinaldinc compounds, (P.), B., 290. Recovery of organic products, in particular liquid products, from solid carbonaceous substances by pressure-extraction, (P.), B., 754. Regeneration of alkaline washing liquids laden with hydrogen sulphide, (P.), B., 910. Resinous condensation products, (P.), B., 1374. [Resinous] condensation products [from abietinols], (P.), B., 63. [Resinous] polymerisation products, (P.), B., 371, 470. [Resinous] polymerised carboxylic acids and derivatives thereof, (P.), B., 371. Urca-formaldehyde resins, (P.), B., 469, 470. Natural rubber and artificial rubber-like masses, (P.), B., 949. Rubber mixtures stable to light. (P.), B., 1246.

mixtures stable to light, (P.), B., 1246.
Safranine dyes, (P.) B., 889. Salts of condensation products, (P.), B., 759. Separation of components of a mixture of salts, (P.), B., 1336. Seed grain disinfection, (P.), B., 1336. Seed grain disinfection, (P.), B., 378. [Matt] artificial silk, (P.), B., 1323. Development of silver halide emulsions in colour, (P.), B., 189. Soap preparations, (P.), B., 367. Apparatus for electrolysis of aqueous solutions of sodium sulphate, (P.), B., 150. Sound-record carriers, (P.), B., 1373. Artificial sponges, (P.), B., 430. Steel alloys suitable for parts of apparatus subjected to high temperatures, (P.), B., 690. Sulphamic acid fluorides, (P.), B., 215. Sulphates and sulphur, (P.), B., 1336. Sulphonic acids of 5-[3-] hydroxyacenaphthene, (P.), B., 420. After-treatment of condensation products containing sulphur, (P.), B., 262. Sulphur dyes, (P.), B., 123, 1031. Black sulphur dyes, (P.), B., 888. Sulphurcontaining additive compounds of alkyl or aralkyl halides, (P.), B., 758. Removal of organically combined sulphur from gases, (P.), B., 410.

Tanning agents, (P.), B., 375. Tanning agents containing iron, (P.), B., 476. Synthetic tanning agents, (P.), B., 267. Water-soluble condensation products having tanning action, (P.), B., 267. Tanning hides and pelts with the aid of iron compounds, (P.), B., 476. Tanning hides and skins, (P.), B., 69. Tetrakisazo-dyes, (P.), B., 1182. Tetra-

*I. G. Farbenindustrie Akt.-Ges.—continued. kisazo-dyes containing copper, (P.), B., 532. Dressing textiles, (P.), B., 663. Improvement [prevention of thread displacement] of textiles, (P.), B., 776. Rendering textiles water-repelling, (P.), B., 434. Treatment of textiles, (P.), B., 662. Textile assistants, plastics, etc., (P.), B., 1022. Treatment of textile fibres, (P.), B., 27. Improved artificial textile materials, (P.), B., 1322. Treatment of textile materials, (P.), B., 1322. ment of textile and other fibrous materials, (P.), B., 432. Assistants for use in textile, leather, paper, and similar industries, (P.), B., 21, 118, 1312. Stable product therapeutically useful in relation to bleeding, (P.), B., 392. Thiazolium compounds, (P.), B., 220, 1270. Thiobarbituric acid compounds, (P.), B., 1135. Thiourea derivative, (P.), B., 288. Treatment of thixotropes, (P.), B., 402, 995. Removal of liquid from thixotropes or masses of similar nature, (P.), B., 633. Triarylmethane dyes containing metal, (P.), B., 1317. Purification of tricresyl [tritolyl] phosphate used for extraction of phenols, (P.), B., 217. Trifluoromethylarylsulphonic acids, (P.), B., 527. Acid triphenylmethane dyes, (P.), B., 123. Basic triphenylmethane dyes, (P.), B., 224. Trihydroxydibenzanthrones and their quinones, (P.), B., 763. [Black] tris- amd tetrakis-azodyes, (P.), B., 223. Decomposition of substances containing tungsten sulphide, (P.), B., 343.
Valves for use in pumping liquids

containing solid substances under pressurc, (P.), B., 307. Vat dyes, (P.), B., 532, 763, 1030. Vat dyes [derived from naphthalenetetracarboxylic di-imides], (P.), B., 224. Vat dyes of the anthraquinone series, (P.), B., 223, 763, 886, 887, 1029, 1030, 1182, 1317. Vat dyes of the anthraquinone [acridone] series, (P.), B., 886. Vat [benzanthrone] dyes, (P.), B., 1028. Vat dyes of the dibenzanthrone series, (P.), B., 886. Vat dyes [of the pyrazinoanthraquinone series], (P.), B., 224. Vat [sulphur] dyes, (P.), B., 1031. Treatment of vegetable or artificial fibres, (P.), B., 233. Treatment of vegetable or artificial fibrous material, (P.), B., 233. Shaped articles from polymerised vinylcarbazole, (P.), B. 1239. Vinyl compounds, (P.), B., 421, 527. Vinyl [derivatives of heterocyclic] compounds, (P.), B., 1179. Vinyl esters, (P.), B., 325. Vinyl ethers, (P.), B., 525. Polymeric products derived from aromatic vinyl hydrocarbons, (P.), B., 119. Nitrogenous polyvinyl derivatives (P.), B., 22. [Curled, staple] threads from viscose, (P.), B., 429. Vitamin preparation, (P.), B., 291, 621.

Washing agents and detergents, (P.), B., 214. Washing and cleansing agents, (P.), B., 1327. [Products for] washing and cleansing, (P.), B., 539. Washing, cleansing, dispersing, solvent, and similar agents, (P.), B., 587. Washing, wetting, cleansing, dispersing, and similar agents, (P.), B., 327. Washing, wetting, emulsifying, softening, and similar agents, (P.), B., 118. Improvement of [washing-]fastness of [substantive] dyeings, (P.), B., 538. Washing out gaseous weak acids from gases, (P.), B., 344.

^{*} Entries arranged according to subjects.

*I. G. Farbenindustrie Akt.-Ges.—continued. Softening of unpurified water, (P.), B., 5. Gas producers for continuous preparation of water-gas, (P.), B., 14. Water paints, (P.), B., 1375. Improving [water-proofing] natural or artificial fibrous materials, (P.), B., 434. Waterproofing of textile materials, (P.), B., 1197, 1331. [Wetting agents for] mercerisation, (P.), B., 539. White-tipped skins or furs, (P.), B., 818. [Wool and vat] dyes [of the naphthalenetctracarboxylie di-imide series], (P.), B., 1317. Acid wool dyes, (P.), B., 1184. Acid wool dyes of the anthraquinone series, (P.), B., 763, 886, 1183. Acid wool dyes [of the phenosafranine series], (P.), B., 889.

Zirconium oxychloride, (P.), B., 1202. Barth, W., and Forrest, J., packages of

chemicals, (P.), B., 1337. and Carpmael, A., tanning materials, (P.), B., 1382.

Chwala, A., and Waldmann, E., treat-

ment of textiles, (P.), B., 775. and Groves, W. W., artificial threads, etc., (P.), B., 28. Spinning of viscose, (P.), B., 429, 1323.

and Inhabad-Ges.m.b.H., oxygen rescue apparatus, (P.), B., 626.

and Internat. Hydrogenation Patents Co., production of products from solid carbonaceous materials by destructive hydrogenation, (P.), B., 112. Destructive hydrogenation of solid carbonaceous material, (P.), B., 519. Production of hydrocarbon products from distillable carbonaceous materials by treatment with hydrogenating gases, (P.), B., 645.

and Johnson, G. W., transparent [glass] parts of metal-vapour lamps, etc., (P.), B., 672. Acetaldehyde from gases containing acetylene, (P.), B., 759. N-Vinyl [heterocyclic] compounds, (P.), B., 1179. [Anthraquinone] vat dyes, (P.), B., 1182. Ureas [pharmaceuticals] from aω-diamino-carboxylic acids, (P.), B., 1268.

and Klein, H., absorption of ethers [dimethyl ether], (P.), B., 758.

and Magnesium Electron, Ltd., welding of magnesium and its alloys, (P.), B.,

and Standard Oil Development Co., lowmol. wt. olefine polymer[ide]s, (P.), B., 209.

Iandelli, A., and Botti, E., crystal structure of compounds of the rare earths with the metalloids of the fifth group. I. Phosphides of lanthanum, cerium, and praseodymium. II. Nitrides of lanthanum, cerium, and praseodymium. III. Arsenides and antimonides of lanthanum, cerium, and .prascodymium, A., I, 401, 501, 603.

Ianovici, V., andesitic rocks of Ditrău, A., I, 269.

Iball, J., crystal structure of condensed-ring compounds. IV. Fluorene and fluorenone, A., I, 18. Crystal structure of condensed ring compounds. V. Three isomeric dibenzcarbazoles, A., I, 401.

Ibarz, J., and Feyto, A., conductometric study of reaction between the cupric ion and potassium ferrocyanide, A., 1, 199. Ichiba, A., and Somekawa, E., fatty oil,

especially the cholesterol ester, of rat sarcoma, A., III, 89.

Ichikawa, C., manurial effects of guano on rice plants, B., 378.

Ichikawa, N., constitution of shonanic acid, one of the two characteristic volatile acids from the wood of Libocedrus formosana, Florin. I. Isolation of shonanic acid and its general properties. II. Reduction and bromination of shonanic acid. III. Oxidation of shonanic acid. IV. Dihydroshonanyl alcohol and optical activity of shon-anic acid and its derivatives. V. Oxidation of dihydroshonanyl alcohol and ozonalysis of shonanic acid. VI. Oxidation of dihydroshonanic acid with ozono and potassium permanganate, A., II, 108, 331, 381. See also Kainku, K.

Ichikawa, Y., straight asphalts. IX. Relaation between paraffin content and appearance of asphalt. X. Relation between paraffin content and [asphalt] strength. XI. Conclusion, B., 10, 107. Blown asphalts. I., II., V.—VIII., and

X., B., 202, 748, 1003. Ichim, C. See Ionesco-Matiu, A.

Ichitsubo, H. See Terai, K.

Ichok, G., and Toussaint, G., effect of occupation on blood-phosphate and -calcium in pregnancy, A., III, 206. Iddings, C., Kennedy, J. N., and Muralo Co.,

prevention of foam [in paint], (P.), B., 1242.

and Muralo Co., casein solutions, (P.), B., 952.

See also Gen. Chem. Co.

Iddles, H. A., Lang, E. H., and Gregg, D. C., 3-vinyl-pyridine and -piperidine, A., II,

Ide, W. S., and Buck, J. S., pharmaco-Iogically active compounds from β alkoxyphenylethylamines, A., II, 240. See also Buck, J. S., and Hjort, A. M.

Ideal Werke Akt.-Ges. für Drahtlose Telephonie, electrical contacts, (P.), B., 937. Idoux, L., protection against corrosion of iron by brine, B., 44.

Ievinš, A., determination of calcium as oxide, A., I, 46.

and Straumanis, M., lattice constant of

purest aluminium, A., I, 67. Igarashi, M., Hatta, T., and Kao Sekken Kabushiki Kaisha Nagase Shokai, apparatus for manufacturing a fibrous soap, (P.), B., 697. Igarasi, S., and Isida, Y., influence of

addition agents in extraction of soyabean oil with [ethyl] alcohol, B., 1366.

Igata, A., changes in the density of silver with annealing and cold-working, A., I, 557. Changes in density of silver by cold-hammering, B., 1066.

Iglesias, G., solubility in alkalis of phenolic derivatives, A., II, 21.

Ignatieff, V., distribution of phosphatase activity and analysis of growth in Canada wonder bean, A., III, 442.

Ignatiev, A., obtaining natural latex from rubber-bearing plants, B., 472.

Ignatius, A., anti-bacterial inhibitory agent (inhibin) in nasaI mucus, A., III, 417. Ihlefeldt, J., and Polysius A.-G., G., pul-

verising apparatus, (P.), B., 98.

Ihlow, F. See Fornet, A.

Ihrig, H. K., and Globe Steel Tubes Co., cementation [of ferrous metal with copper, nickel, or chromium], (P.), B., 1225.

Iida, H. See Kameyama, N.

Iimori, S., and Yoshimura J., xenotime nodules from Kawabe; composition of Ishikawa xenotime, A., 1, 155. Cathodoluminescence spectrum of danburito, A., I, 382. Cathodo-luminescence spectra of felspars and other alkali aluminosilicate minerals, A., I, 434.

limori, T., electron diffraction studies of oxides formed on iron, A., I, 555.

See also Iitaka, I. Iio, M. See Tanaka, Y

Iio, N. See Yamafuji, K. Iitaka, I., new equilibrium diagram for the system Fe-C, A., I, 517.

Miyake, S., and Iimori, T., examination of passive iron by electron diffraction, A., I, 119.

and Shiota, R., beryllium. II., B., 1066. and Tanaka, Takeshi, chilling and inverse chilling [of metal castings], B., 573.

Ijdo, J. B. H., content of vitamin-C in different varieties of potatoes (Holland), A., III, 327. Influence of fertilisers on the carotene and vitamin-C content of plants, B., 271.

Ikebe, S., effect of narcotics of the fatty series on sensitivity of the external car and skin of the back of guinea-pigs, A., III, 25. Surface anæsthesia in the external car of the guinea-pig. II .- IV., A., III, 25. Effect of opium alkaloids on sensitivity of the external ear and skin of the back of guinea-pigs, A., III,

Ikeda, M., chemical nature of soils in North Manchuria, B., 953.

Ikeda, S., oligodynamic action of silver with special reference to silver halides, A., III, 489. Ikeda, T. See Kafuku, K.

Ikegaki, I., contents of carotene and vitamin-A in leprous sera, A., III, 363.

Ilahi, I. See Singh, B.

Iler, F. M., pulveriser, (P.), B., 3. Ilinski, I. A., pulp from sawdust, B.,

Iliwitzki, J., Appelbech [coal-]briquetting

process, B., 102.

Iljin, B. V., surface phenomena and mechanical properties of dispersed phases, A., I, 235.

Leonteva, A. A., and Bragin, S. V., adsorption forces and their electrical nature. III. Nature of the forces of wetting, A., I, 179.

Iljin, V. S., death of plant cells in single and balanced salt solutions, A., III, 47. Plasmolysis and deplasmolysis:

fluence of salts and $p_{\rm H}$, A., III, 158.

Iljinski, V. P., Tschertok, A. I., and Rahmilevitsch, S. L., production of bromides by action of bromine on bases in presence of formates, B., 33.

Illari, G., action of xanthhydrol on pyrroles, A., II, 524.

Illarionov, V. V., and Demkovski, P. refractometric determination of [seed] oil content, B., 366.

and Kogan, I. S., microcolorimetric determination of acidity of fatty oils, B., 153.

Illényi, A., and Zselyonka, L., metabolic effects of the white bean, A., III, 420. See also Zselyonka, L.

Illies, R., granulation of pressed yeast. IV., B., 277.

Illiminskaja, V. T., colorimetric determination of manganese in soils, B., 954. Illingworth, J. W. See Bradley, A. J.

Illinois Clay Products Co. Sec Jones, O. L. Illinois University. See Johnstone, H. F.

Illsley, P. F. See Bates, L. F. Ilzhöfer, H. See Kisskalt, K.

Imai, H., distinction between mitsumata and gampi fibre, B., 1318.

Imai, I., 3-hydroxy-7-ketocholanic and chenodeoxycholic acids in guinea-pig's bile, A., III, 377.

Imai, S. Seo Shibata, F. L. E.

Imai, T., chemistry of vitamin- B_1 , A., III, 404.

See also Nomura, S.

Imam, A., and Khastgir, S. R., dielectric constant of an electronic atmosphere for ultra-short waves, A., I, 284. Dielectric constant of ionised gases, A., I, 347.

Imamnra, S. See Kita, G.

Imanishi, S., gold deuteride bands, A., I, 279. New ultra-violet ${}^{1}\Sigma \rightarrow {}^{1}\Sigma$ band system of gold deuteride, and a new analysis of gold hydride spectrum, A., I, 342.

Imboden, M. Sco Bills, C. E., and Cox, W. M., jun.

Imhoff, K., chemical methods of treating

sewage; German practice, B., 397.

Imhoff, W. G., hot tinning of copper, B.,
246. Development and control of

spangles on galvanised iron, B., 1348. Immerman, S. L., gastric acidity in acne vulgaris: consideration of normal gastric

acidity, A., Ill, 170.

Immig, H., and Jander, G., applicability of conductometric processes with visual observation in micro-chemical investigations. I. Titration of small amounts of lead, cadmium, copper, silver, and bismuth by means of hydrogen sulphide, A., I, 328.

See also Jander, G. Imoto, M. See Ono, Kashichi.

Imperial Chemical Industries, Ltd., derivatives of hydrocyanic acid, (P.), B., 35. Plasticised cellulose ester compositions, (P.), B., 64. Plasticised ether compositions, (P.), B., 64. [Urea-form-aldehyde] artificial resins [containing sulphur], (P.), B., 813. Sulphuric acid, (P.), B., 1336.

and Archer, N., fluid-tight scals between machine members, (P.), B., 100.

and Atkins, G. R., cleaning of heatinterchanger elements, etc., by pressure

fluid, (P.), B., 510.
Baird, W., and Davies, J. S. H., thiazole derivatives, (P.), B., 220.

Baird, W., and Jones, Maldwyn, rubber anti-agers, (P.), B., 266.

Baird, W., and Nettleship, G. E., vulcanisation accelerators [for rubber], (P.), B., 815.

Baldwin, A. W., and Piggott, H. A., new aliphatic and cycloaliphatic halides,

(P.), B., 1174. and Barsby, C. R., chlorinated rubber

products, (P.), B., 161.

and Baxter, J. P., rubber derivatives, (P.), B., 67.

Blackshaw, H., and Rogers, M. A. T., dyeing of cellulose esters and ethers, (P.), B., 663. Bone, IV. A., and Newitt, D. M., oxygen-

ated organic compounds, (P.), B., 328. and Booth, W. E., safety device for distillation apparatus, etc., (P.), B., 1289.

Imperial Chemical Industries, Ltd., Briggs, H. B., and Hardacre, R. W., printing textiles containing cellulose esters and ethers, (P.), B., 663.

Brown, R. R. H., and Cooper, J. M., textile materials [doubled or multiple

fabrics], (P.), B., 1193. and Brownsdon, H. W., machines for testing materials for wear, (P.), B.,

Brownsdon, H. W., Cook, M., and Duddridge, G. K., alloys containing copper and zine, (P.), B., 357.

Bunbury, H. M., and Giles, C. H., dyeing of cellulose esters and ethers, (P.), B., 337.

Burchill, J., Piggott, H. A., and White, G. S. J., treatment of chrome-tanned leather, (P.), B., 952.

and Bnrrage, L. J., treatment of [removal of sulphur dioxide from] gases containing hydrochloric acid, (P.), B., 1336.

Callender, A., and Stevenson, A. B. automatic control of variable physical characteristics, (P.), B., 309.

Carey, W. F., and Bosanguet, C. H., classification of materials, (P.), B., 993. and Challenor, W. A. P., purification and granulation of pentaerythritol tetra-

nitrate, (P.), B., 417. Challenor, W. A. P., and Scott, G. A., transference of liquid explosives, (P.), B., 733.

and Clifford, I. L., potassium sulphate, (P.), B., 437, 908. Alkali hydroxides, (P.), B., 1201. Caustic soda, (P.), B., 1201.

Coffey, S., and Haddock, N. H., aniline derivatives, (P.), B., 1023. Mononitroalkylanilines, mononitroalkylaevlanilines, and derivatives thereof, (P.), B., 1023. Alkylanilinemonosulphonic acids, (P.), B., 1175. and Cooper, R. C., halogen-containing

rubber derivatives, (P.), B., 67.

and Coulthard, A., therapeutically active

substance, (P.), B., 842. and Crawford, J. W. C., unsaturated organic compounds, (P.), B., 21.

Crawford, J. W. C., and Grigor, J. unsaturated organio compounds compounds [amides], (P.), B., 216. and Curd, F. H. S., [blue] azine dyes [for

wool], (P.), B., 330.

and Davies, G. P., highly concentrated

nitric acid, (P.), B., 341. and Dean, H. P., lids for pressure-resisting vessels, (P.), B., 301.

Dean, H. P., and Refrigeration Patents, Ltd., lids for pressure-resisting vessels,

(P.), B., 301. Dnnbar, C., and Gomm, A. S., treatment

of textile fabrics, (P.), B., 1330.

Dunn, J. S., Himsworth, F. R., and
Lefebure, V., calcium sulphate plasters, P.), B., 244, 349.

Ellingworth, S., and Elson, L. A., fungicidal and bactericidal agents, (P.), B., 1256.

and Evans, J. G., viscose rayon, (P.), B.,

Evans, J. G., and Salkeld, C. E., finishing of textiles, (P.), B., 1329.

Evans, J. G., and Slater, S. A., treatment of cellulosic textile fabrics, (P.), B.,

and Fawcett, E. W., separation of resins from natural gutta-percha and similar materials, (P.), B., 67.

Imperial Chemical Industries, Ltd., and Fawcett, E. W., apparatus for vacuum distillation, (P.), B., 99. Insecticidal products from pyrethrum flowers, (P.), B., 379. Refining of natural waxes, (P.), B., 465. Shortpath highvaouum distillation, (P.) B., 1148.

Fawcett, E. W., Gibson, R. O., Perrin, J. G., Paton, J. G., and Williams, E. G., polymerisation of ethylene, (P.),

B., 1309.

Fawcett, E. W., and Whittaker, D., oils rich in vitamins, (P.), B., 587.

Ferguson, John, and Pirie, H., fumigant compositions, (P.), B., 94.

Fleming, J. S. B., and Payn, R. C., combustion-train elements and fuses for blasting and pyrotechnic and similar purposes, (P.), B., 503. and Fraser, R. G. J., high-vacuum distill-

ation, (P.), B., 994.
Gale, P. T., Hamilton, F., and Reynolds,

R. J. W., paper, (P.), B., 431. Glass, J. V. S., and Hirsh, B. W., gelatin and glue, (P.), B., 593.

and Gleave, W. W., halogenated derivatives of methane, (P.), B., 524.

Goldstein, R. F., McQueen, S. T., and Fairweather, D. A. W., textile printing [with sulphur, indigoid, and thio-indigoid dyes], (P.), B., 232.

Goodall, A. W., and Walters, O. H., stabilisation of solutions of per-

compounds, (P.), B., 1336. and Habgood, B. J., rubber articles, (P.), B., 1092.

Habgood, B. J., and Morgan, L. B., composite rubber articles and materials, (P.), B., 1379.

Haddock, N. H., and Lodge, F., anthra-

quinone dyes, (P.), B., 1182. Haddock, N. H., Lodge, F., and Lumsden, C. H., [acid] anthraquinone dyes, (P.), B., 122.

Himsworth, F. R., and Dunn, J. S., calcium sulphate plasters, (P.), B.,

Himsworth, R. W., and Lefebure, V., anhydrite plasters, (P.), B., 349. and Hood, N. R., apparatus for de-

greasing by means of volatile solvents, (P.), B., 154.

Hood, N. R., and Booth, W. E., degreasing apparatus, (P.), B., 808. Kerr, C. A., and Woolcock, J. W.,

recovery of phenols, (P.), B., 113. and Knight, A. H., azo-dyes, (P.), B., 221, 422, 762, 1181. [Water-soluble] azo-dyes [for acetate silk, silk, wool,

and leather], (P.), B., 330. Knight, A. H., and Lodge, F., monoazodyes, (P.), B., 762.

and Lefebure, V., plaster board, etc., (P.), B., 557.

and Leicester, F. D., fluorine derivatives of aliphatic hydrocarbons, (P.), B.,

Linstead, R. P., and Dent, C. E., halogenated compounds [green pigments], (P.), B., 471.

Lodge, F., and Lnmsden, C. H., [higher] alkoxyanthraquinones, (P.), B., 328. and Lowe, A. R., colouring matters

[phthalocyanines] from o-arylene dicyanides, (P.), B., 889.

and Lowes, A. P., solid materials in liquids [chlorinated rubber products], (P.), B., 306. and McCowen

McCowen, J. L., high-vacuum diffusion pumps, (P.), B., 739.

Imperial Chemical Industries, Ltd., Mc-Cowen, J. L., and Fawcett, E. high-vacuum diffusion pumps, (P.), B., 739.

and Malam, J. E., heat treatment of metals, (P.), B., 1070.

Mendoza, M., and White, S. J., colouring

of leather, (P.), B., 1247.

Moilliet, J. L., and Todd, W., improved foaming agents [for fire-extinguishing], (P.), B., 1145.

Montgomery, T. N., and Lowes, A. P., chlorinated rubber, (P.), B., 816.

and Moore, J. G., halogen derivatives of rubber, (P.), B., 67. and Mudford, H. D., delustred artificial

silk, (P.), B., 233.

Murray, A. G., and Nettleship, G. E., vulcanisation accelerators, (P.), B., 1246.

Nash, A. W., Hunter, T. G., Wiggins, W. R., and Lowes, A. P., reaction products of aromatic hydrocarbons with halogenated aliphatic hydrocarbons, particularly for lubricating purposes, (P.), B., 1313.

and Pearson, J. L., decomposition of ammonia, (P.), B., 907.

Piggott, H. A., and Woolvin, C. S., process of [vat-]dyeing, (P.), B., 538. Manufacture and application [in dyeing] of [higher] quaternary ammonium salts, (P.), B., 1177.

and Pirie, H., emulsions, (P.), B., 327. Reynolds, R. J. W., Walker, E. E., and Woolvin, C. S., treatment of cellulosic

material, (P.), B., 775.

and Rose, F. L., copper-containing monoazo-dyes, (P.), B., 532.

and Rubenstein, L., detonators, e.g.,

blasting detonators, (P.), B., 1412.

Rubenstein, L., and Taylor, W., fuse-heads for electrical firing, (P.), B., 1280. Saunders, K. H., and Rogers, M. A. T., stabilised diazo-compounds and com-

position of matter, (P.), B., 221. Shaw, Cecil, Carter, P. G., and Sennett, R. H., colouring of acetate artificial

silk, (P.), B., 774. and Sosson, C. E., delay-action detonators and fuses and delay compositions

for use therein, (P.), B., 503.

Spencer, S. B., and Dutton, J. C., de-

greasing metal strip, (P.), B., 1228. and Strouts, C. R. N., aqueous dis-persions of nitrocellulose, (P.), B., 429. and Taylor, James, blasting devices, (P.), B., 623. [Gas-generating] blasting device, (P.), B., 846.

and Vigers, B. E. A., degassers, (P.), B., 306. High-vacuum distillation

apparatus, (P.), B., 306. Walker, F. T., and Hetherington, A. C. floor coverings and similar [plastic]

materials, (P.), B., 63.
Williams, V. H., and Foster, B. W., gelatinous or semi-gelatinous blasting

explosives, (P.), B., 396. and Wyler, M., [phthalocyanine] colour-ing matters, (P.), B., 224, 889.

Imperial Institute, tantalite deposits in S.W. Uganda, A., I, 432. Shea nuts from the Gold Coast, B., 152. Sources, production, and uses of selenium and tellurium, B., 436. Oil-palm fruits from Kenya, B., 462. Granadilla (passion fruit) seed [and oil] from Kenya, B., 463. Vetiver oil from Jamaica, B., 497. Tung seed and oil from Empire sources. III., B., 940.

Smelting Corporation, Ltd., Imperial Gamble, D. L., and Grady, L. D., jun., [thixotropic] paints and pigments, (P.), B., 947.

Impey, F. L., and Morland & Impey, Ltd., photo-lithographic printing plates, (P.), B., 732.

Imre, L., kinetics of surface processes in crystal lattices. III. Elementary processes of ionic migration at solid-liquid interfaces, A., I, 25. Kinetic-radioactive investigations on the active surface of crystalline powders, A., I, 299.

Inaba, R. See Goto, K. Inagaki, E. See Shinoda, R. Inai, T. See Takeuchi, T.

Independent Air Filter Co. Sec Dahlman, V. Indest, H. See Wieland, H.

India Rubber, Gutta Percha, & Telegraph Works Co., Inc. See Puffett, W. W.

Indian Lac Research Institute, information and advice to shellac manufacturers, B., 1237. Analytical data for shellacs, B., 1237.

Indian Refining Co. See Govers, F. X. Indian Territory Illuminating Oil Co. See Rison, C. O.

Indiana Steel & Wire Co. See Judy, P. R., and Pennington, H. R.

Indovina, R., and Fiandaca, S., disturbance of lipin metabolism in patients with malignant tumour. I. and II., A., III, 12, 460.

Sec also Corsini, E., Giacalone, A., and Oliveri-Mandal λ , E.

Industrial Chemical Sales Co., Inc. See Harris, J. P.

Industrial Laboratories, Ltd. See Cox, E. E. Industrial Patents Corporation, Brown, L. C., Grettie, D. P., and Newton, R. C., shortening [in foodstuffs], (P.), B., 390.

and De Vout, A. W., structures or apparatus such as drying tunnels, (P.), B., 1287.

See also Christopher, E. F., and Paddock, L. S.

Industrial Research Laboratories, cast-iron alloy, (P.), B., 690. Lined-metal cylinders and other lined-metal articles, (P.), B., 690.

Industrias Quimicas Argentinas " Duperial " Société Anonyme, and Garsoglio, E., insecticides [for destroying locusts], (P.), B., 172.

Industrikemiska Aktiebolaget. See Göth, H. E. A., and Öman, E.

Ing, H. R., and Patel, R. P., synthesis of local anæsthetics from cytisine, A., II, 80. Local anæsthetics from cytisinc, A., III, 217. See also Clark, A. J.

Inge, L. D., and Walther, A. F., electric breakdown in liquid dielectrics, A., I, 11.

See also Walther, A. F.

Ingeniörsfirman Fliesberg Aktiebolag, keeping the wire of Fourdrinier machines for manufacture of paper, cardboard, etc., clean, (P.), B., 1194.

Ingersoll, L. R. See Zuehle, A. A. Ingersoll, S. L. See Borg-Warner Corp. Ingerson, E. See Morey, G. W.

Ingham, J., sodium chloride content of cerebrospinal fluid in tuberculous menin-

gitis, A., III, 380. Ingham's Thornhill Collieries, Ltd., and Taylor, T., purification of gas obtained by distillation of coal and other carbonaccous material, (P.), B., 872.

Ingle, D. J., and Kendall, E. C., atrophy of the adrenal cortex of the rat produced by the administration of large amounts of cortin, A., III, **490.**

Nilson, H. W., and Kendall, E. C., effect of cortin on concentrations of some constituents of the blood of adrenalectomised rats, A., III, 400.

See also Kendall, E. C.

Inglis, D. R., spin-orbit coupling in nuclei, A., I, 6. Perturbation theory of light nuclei: ⁴He and ⁶Li, A., I,

and Young, L. A., stable isobars, A., I, 210.

Inglot, J. See Kamieński, B.

Ingmanson, J. H. See Kemp, A. R. Ingold, C. K., Raisin, C. G., and Wilson, Christopher L., direct introduction of deuterium into aliphatic systems. I. Hydrogen exchange between sulphuric acid and paraffinoid hydrocarbons, A., II, 1. Direct introduction of deuterium into the aromatic nucleus. I. Qualitative comparison of the efficiencies of some acidic deuterating agents and of the influence of some aromatic substituents, A., II. 14.

See also Bailey, C. R., Cooper, K. A., Cowdrey, W. A., and Hughes, E. D. Ingold, C. T., effect of light on absorption of salts by Elodea canadensis, A., III,

Ingols, R. S. See Rudolfs, W.

Ingraham, H. O. C. See Gen. Chem. Co.

Ingraham, M. A., factors controlling pigment production by Mycobacterium phlei, A., III, 356.

Ingraham, R. C., non-specificity of the chloride impoverishing mechanism of small intestine, A., III, 62.

and Visscher, M. B., effects of a bivalent cation on sodium removal from intestinal loops, A., III, 307.

Ingram, M., action of salts on bacteria, A., III, 71, 435. Ingram, W. R., and Fisher, C., relation of

posterior pituitary to water exchange in tho cat, A., III, 229.

Inhabad-Ges.m.b.H. See I. G. Farbenind. Inhoffen, H. H., conversion of sterols into aromatic compounds; conversion of cholesterol into isoequilin, A., II, 147. Transformation reactions of brominated derivatives of cholesterol. IV. Experiments with dibromocholestanone, A., II, 423.

Inland Lime & Stone Co. See Wygal, C. D.

Inman, B. N. See Sage, B. H.

Innes, Jean M., phosphagen formation and oxidation of triose phosphate in muscle extract, A., III, 422.

Innes, J. R. M., and Nicolaysen, R.,

assimilation of the Steenbock-Black diet in normal and vitamin-D-deficient rats with and without cæcum, A., III,

Innes, R. F., absorption of moisture by salts and by glucose when stored in atmospheres of varying relative humidity, B., 340. Metallic soaps in glacé-kid, sealskin, and gloving leathers, B., 818.

Innis, Speiden & Co. See Bridgeman, W. A.

Inoue, K., and Nagai, S., mixed Portland cements. XVI., B., 347.

Inone, R., and Matsuura, Akiyoshi, composition of cocoon-silk of Eriogyma pyretorum and Theophila mandalina. I. Inorganic constituents and nitrogen distribution, A., III, 295. Heat-resistance of silk fibre treated with chemical reagents, B., 225.

Inoue, S., wax and resin of Tarazacum root, A., II, 159. Protective colloids "protalbinic" and "lysalbinic" acids, A., II, 448. Ricin, A., III, 333.

See also Sawai, I.

See Sakaguchi, K. Inoue, T. Inoue, Y. See Mizushima, S.

Inouye, K. See Rajewsky, B. Inouye, T., residual carbon and nitrogen of blood in acute lethal hydrocyanic acid

poisoning, A., III, 138.

Inozemtzov, S., separation and velocity of sedimentation of p-toluenesulphonyl chloride, in reaction between sulphonyl chloride mixture and water, B., 1017. Application of polychlorides to manufacture of naphthionate, B., 1017.

Insko, W. M., jun. See Erikson, S. E., and Lyons, M.

Insley, H., structural characteristics of constituents of Portland cement clinker, B., 39.

Institute of Paper Chemistry, instrumentation studies. III. Evaluation of [paper] formation by the Thwing formation tester. VI. Modified Oxford glarimeter [for paper]. VII. Comparison of the Bausch & Lomb glossmeter and the Ingersoll glarimeter [for measuring paper gloss]. VIII. Analysis of "smoothness" [of paper]. IX. Bekk and Gurley smoothness testers. X. Measuring smoothness of paper. XI. Effect of humidity in physical testing of paper. XII. Effect of relative humidity on physical properties with respect to hysteresis effect in changes from one humidity to another. XIII. Adapt-ability of the G[eneral] E[lectric] reflexion meter as a colour analyser [for Taber and the Gurley stiffness testers [for paper]. XV. Comparison of the Carter and Gurley stiffness testers. XVI. Correlation between degree of sizing [of paper] as determined by the Valley, TAPPI, and Currier methods. XVII. Transparency of tinted white glassine papers and development of an instrument for its measurement. XVIII. Rate of penetration of oil through [printing] paper. XIX. Photo-electric device for objective measurement of light scattered by small particles, and surface fuzz of paper, B., 227, 332, 427, 657, 770, 894, 1189.

Institution of Civil Engineers, Research Committee, free shrinkage and shrinkage cracking [of concrete], B., 915.

Institution of Gas Engineers, 3rd report of the Gasholder Committee, B., 9. and Key, A., recovery of ammonia from

coal and similar gases, (P.), B., 14. Institution of Mechanical Engineers, second report of the Welding Research Committee, B., 1068.

Institution of Mining Engineers, dustproofing of coal, B., 998.

Institution of Mining & Metallurgy, dustsampling investigations, B., 2.

Insua, N. E., determination of total carbon in urine; modification of Dennstedt's method, A., III, 170.

Insulite Co. Sec Ellis, G.H.

Interchemical Corporation, and Gessler, A. E., production and use of coloured printing compositions, (P.), B., 1329.
Intermetal Corporation. See Jenness, L. G.
International Bitumen Emulsions, Ltd., Montgomerie, J. A., and Archibald, P. K., watertight and waterproof papers and pasteboards, (P.), B., 1324.

Internat. Cement Corporation. See Avnsoe, T., Durbin, H. R., and Norvig, J.

Internat. Combustion, Ltd., and Crites, J., method of and mill for pulverising, (P.), B., 303.

and Davidson, G. W., gravitation concentration of mineral values, particularly

coal, (P.), B., 1146. Harlow, W. F., and Goodwin, F. G., rotary filters, (P.), B., 305.

and L'Herminier, A., steam generator for burning refuse and other low-calorific fuel, (P.), B., 509.

Internat. Commission for the Methods of Sugar Analysis, testing of molasses, B., 961. Determination of decolorising power and filtering quality of chars [for the sugar industry], B., 962. Application of refractometer methods to sugar analysis, B., 962. Evaluation of refining qualities of raw cane and beet sugars, B., 962. Weighing, taring, sampling, and classification of sugars, B., 962. Determination of reducing sugars and influence of overheating on determination of invert sugar, B., 963. The 100° S point of the saccharimeter, B., 963. Elimination of errors due to lead clarification in polarising raw sugars, B., 963. Analysis and evaluation of refined sugars, B., 963. Value of Clerget divisors for [sugar-]inversion methods, B., 963. Determination of water in sugars and sugar products by drying, B., 964. Standardisation of quartz control plates [of saccharimeters], B., 964. Conductometric determination of ash content [of sugars], B., 964. Determination of raffinose, B., 964. Colorimetry in the sugar industry, B., 964.

Internat. Hydrogenation Patents Co., Ltd., production of hydrocarbons by destrucmaterials, (P.), B., 13. Hydrocarbons rich in hydrogen, (P.), B., 17. Destructive hydrogenation of coal, (P.), B., 112. Production of hydrocarbon products by treatment with hydrogenating gases of distillable carbonaceous materials and apparatus therefor, (P.), B., 207, 210. Production of hydrocarbon products by destructive hydro-genation of solid carbonaceous ma-terials, (P.), B., 318. Treatment with hydrogenating gases of carbonaceous materials, (P.), B., 318. Production of benzines from middle oils or crude benzines rich in phenols and olefines by hydrogenation, (P.), B., 319. Working-up of [catalytic] materials containing molybdenum or tungsten, (P.), B., 438. Stabilised benzine in destructive hydrogenation of distillable carbon-aceous materials, (P.), B., 519. Simple hydrogenation of unsaturated hydrocarbons and destructive hydrogenation of distillable carbonaceous materials, (P.), B., 754. Destructive hydrogenation of solid carbonaceous materials, (P.), B., 754. Destructive hydrogenation of carbonaceous materials, (P.), B., 872.

Internat. Hydrogenation Patents Co., Ltd., hydrocarbon products, in particular high-boiling oils, from asphaltic sub-stances by catalytic destructive hydrogenation, (P.), B., 1013.

and Brown, C. L., production of hydrocarbons by treatment with hydrogenating gases of distillable carbonaceous

materials, (P.), B., 13.

Deanesly, R. M., Williams, E. C., and Steck, L. V., higher-boiling hydro-carbons from olefines, (P.), B., 520, 648. isoOctane, (P.), B., 523. Motor

fuels, (P.), B., 645. and Taylor, M. D., catalytic hydrogen-ation of polymerides of unsaturated

hydrocarbons, (P.), B., 647.

See also I. G. Farbenind. Internat. Latex Processes, Ltd., laminated articles [containing rubber], (P.), B., 469. Decorative surfaces [on rubber articles, e.g., bathing caps], (P.), B., 816. Rubber articles [from latex], (P.), B., 816. Air-permeable sheet materials containing rubber, (P.), B., 950. Elastic fabrics, (P.), B., 950, 1332. [Laminated] rubber sheet material and articles made therefrom, (P.), B., 1093. Rubber articles [for footwear, etc. from latex], (P.), B., 1246.

and De Porcellinis, G., spreading of liquid coating compositions, (P.), B., 1244. and James, R. G., rubber thread [from

latex], (P.), B., 1092.
Murphy, E. A., Trobridge, G. W., and Andrews, J. A., hollow articles of or containing rubber or similar material and apparatus therefor, (P.), B.,

Murphy, E. A., Trobridge, G. W., and Ward, A. N., rubber structures, e.g., sponge-like or cellular rubber upholstery, (P.), B., 950.

and Soe. Anon. Prodotti Salpa & Affini, S.A.P.S.A., artificial or reconstructed leather, (P.), B., 952.

and Soe. Ital. Pirelli, rubber compositions

[from latex], (P.), B., 815.

Internat. Lead Refining Co. See Peterman, F. B.

Internat. Motor Co. See Day, W. E., jun. Internat. Nickel Co., nickel and nickel alloys, (P.), B., 456. See also Mudge, W. A.

Internat. Nickel Co. of Canada, Ltd. See Simcox, I.J.

Internat. Paper Co. Seo Campbell, John, Lang, F. J., Quinn, R. G., and Sanborn,

Internat. Patents Development Co., dextrose, (P.), B., 277, 382. Crystallisation of dextrose, (P.), B., 382.

See also Kerr, R. W., and Sjostrom, 0. A.

Internat. Precipitation Co., and Grave, G., electrical treatment of gases or liquids, (P.), B., 803.

See also Engert, E., and Lissman, M. A. Internat. Printing Ink Corporation, characteristics and applications of phthalocyanine-blues, B., 1237. Drying of printing ink, (P.), B., 1375.

Gessler, A. E., Guiteras, A. F., and Clarkson, C. F., [setting of] printing [ink], (P.), B., 701.

and Jeuck, F. J., printing and setting ink, (P.), B., 264.

Internat. Scientific Products Co. Sco Elbel,

Internat. Sub-Committee on Special Cements for Large Dams, testing cement in regard to heat of hydration, action on cement by water percolating through concrete, shrinkage, permeability, and workability, B., 785.

Internat. Yeast Co., Ltd., Schultz, A., and Frey, C. N., treatment of [pressed] yeast, (P.), B., 720.

Intonti, R. See Sorrentino, E. Inukai, F. See Nakahara, W.

Inuzuka, H. See Ito, T.

Inventions Holding Corporation. See Fox, A. H.

IO-Dow Chemical Co., and Harrison, L. E., recovery of iodine from brines, (P.), B., 669. Ioanid, N. See Bonciu, C.

Ionesco, I. See Deleano, N. T.

Ionesco-Matiu, A., and Ichim, C., mercurimetric determination of opium alkaloids and their derivatives, B., 1267.

and Popesco, C., modification of the method of Nicloux for micro-determination of ethyl alcohol, A., II, 394. Leuco-bases as analytical reagents, A., II, 436.

Ionescu, A., ultra-violet absorption spectrum of nitrogen dioxide, A., I, 596. Ionescu, M. V., Gaal, I., and Popescu, O., determination of volatile acids in

wine. I., B., 176.

and Popescu, O., determination of volatile acids in wine. II. Influence of lactic acid, B., 176.

Ionescu, N. See Gavrilescu, N.

Ionescu, T., and Soare, A., active carbon from metallic carbides, B., 104.

Ionescu, T. V., structure of the photon, A., I, 6. Calculation of the time interval T between two successive collisions of an electron with the molecules of the ionosphere, A., I, 595.

Ionescu-Mihaiesti, \hat{C} ., Damboviceanu, A. and Leonida-Ioan, C., extraction of holosido-haptens of tubercle bacillus and their chemical properties, A., III, 197. Specificity of the acid-soluble holosido-haptens of the tubercle bacillus, A., III, 197.

Iowa State College of Agriculture and Mechanical Arts. See Levine, M. Ipatiev, V. N., "true" and "conjunct"

catalytic polymerisation of olefines, A., II, 223.

and Corson, B. B., dealkylation of dialkyl-

benzenes, A., II, 405. and Grosse, A. von, alkylation of aromatic [hydrocarbons] with olefines

in presence of boron fluoride, A., II, 10. and Komarevski, V. I., "hydro-polymerisation," A., II, 223. isoOctane production by simultaneous polymerisation and hydrogenation, B., 1016.

and Pines, H., propylene polymerisation under high pressure and temperature with and without phosphoric acid, A., II, 1. Cleavage of side-chains in aromatic hydrocarbons in the form of paraffine by means of aluminium chloride, A., II, 92. Conjunct polymerisation; influence of temperature, concentration, and quantity of sul-phuric acid on polymerisation of olefines, A., II, 131.

and Schmerling, L., identification of alkylbenzenes. I. Identification of monoalkylbenzenes by means of tho acetamido derivative, A., II, 331.

See also Corson, B. B., Grosse, A. von, and Universal Oil Products Co.

Ipatiev, V. V., jun., corrosion of boilers and of high-pressure apparatus, B., 44. and Bogdanov, I. F., hydrogenation of binary organic mixtures. I. Hydrogenation of mixtures of allyl alcohol and oleic acid, A., II, 82

and Levin, M. I., equilibrium between liquid and gas at high pressures and temperatures. I. Solubility of hydrogen in individual hydrocarbons of the aromatic and the naphthenic scries, A., I, 23.

and Ostroumov, N. M., caustic brittleness, B., 45.

Schischkin, V. V., Polev, G. A., and Dubkov, I. A., overvoltago phenomenon for hydrogen, A., I, 33.

Ippach, H., influence of cement mortar on bituminous pavements, B., 555.

Ippersiel, P., extraction of alumina from clays, kaolin, bauxites, etc., (P.), B., 1337.

Iredale, T., and Edwards, T. G., photoreaction of chlorine monoxide and hydrogen, A., I, 317.

and Maccoll, A., thermal decomposition of ethylene dibromide, A., I, 466.

and Stephan, (Miss) D., photo-reaction of hydrogen iodide and methyl iodide, A., I, 370.

Irey, K. M., and Resinox Corp., [phenolic resin] moulding composition, (P.), B., 468.

Irie, H. Sce Taketa, T.

Irmann, R., use of scrap in the aluminium

foundry, B., 51.

Iron & Steel Institute, corrosion of iron and steel, B., 565. inspection of ships, B., 565. [Industrial tests on steels, corrosion in beet-sugar plant, and corrosion of steel rails], B., 566. Heterogeneity of steel ingots. I. Freezing of killed steel ingots. VI. First report of Ingot Moulds Sub-Committee, B., 1349.

Irrera, L. See Oliveri-Mandalà, E. Irvin, J. L., and Wilson, D. W., synthesis of octopine (pectenine), A., III, 295.

Irvine, F. A., hard board, (P.), B., 658. Irving, J. W., Jun. See Du Vigneaud, V. Irving, J. See Larsen, E. S. Irving, J. T. See Mullick, D. N. Irving, L., and Black, E. C., convenient

tonometer for equilibration of blood, A., III, 196.

and Manery, J. F., significance of ohlorides in tissues and animals, A., III, 213.

See also Dugal, L. P.

Irwin, J. P., Thorne, C. B., and Cox, Merrill, apparatus for cleaning gas, (P.), B., 996.

Irwin, M. H., Steenbock, H., and Kemmerer, A. R. [with Weber, J.], influence of vitamin-A, -B, and -D, anæmia, and fasting on the rate of fat absorption in rats, A., III, 230.

Weber, J., and Steenbock, H., influence of certain hydrotropio and other substances on fat absorption, A., III,

Irwin, M. R. See Golden, A.

Isaac, W. E., organic matter content and carbon: nitrogen ratio of South African soils of the winter-rainfall area, B., 477. and Gershill, B., organic matter content and carbon : nitrogen ratio of semiarid soils of the Cape province, B., 477.

Isaacs, M. R., adhesive coating, moulding, sizing, binding, and similar compositions, (P.), B., 1243.

Isacescu, D. A., reaction of acinitroderivatives with halogen compounds. V. Reaction of potassio-9-acinitrofluoreno with halogeno-ketone derivatives, A., II, 102. Nitro-arsines. I. m-Nitro-phenyldichloroarsine, A., II, 127.

Isaev, B. See Vechsler, V. I. Isahaya, S., synthetic organic dyes as contrast media in roentgenography. III. Experimental studies on bladders of rabbits, A., III, 52.

Isakov, E. N. See Kazakov, A. V. Isakov, P. M., determination of fluorine in

natural phosphates, A., I, 374. Isakova, A. See Weichherz, I.

Isamat, F., and Grünbaum, F., therapoutio and toxic effects of strophanthin, A., III,

Isatschenko, B. L., and Maltschevskaja, M. N., biogenic spontaneous heating of

peat, A., I, 156.

Isawa, T., X-ray investigations on tin bronzes. II., A., I, 608.

Isbell, H. S., configuration of the pyranoses in relation to their properties and nomenclature, A., II, 325. Preparation and properties of calcium lactobionate-calcium bromide, B., 85. Crystallising calcium salts of aldonic acids, (P.), B., 1021.

and Pigman, W. W., bromine oxidation and mutarotation measurements of the α - and β -aldoses, A., II, 177. Study of the α - and β -aldoses and their solutions by bromine oxidation and mutarotation measurements, A., II,

Sco also Pigman, W. W.

Ischkin, I., Burbo, P., and Paschkovskaja, A. G., the system acetylene-liquid oxygen, and explosions in rectification plants, A., I, 464.

See also Burbo, P.

Ischtschenko, G. P., laboratory gas generator, A., I, 480. Isco Chemical Co. See Ladd, E. T.

Isemann, W. Seo Wessely, F. Isenberg, I. H., ago and chemical composition of white fir wood, B., 40.

Isenberger, R. M. See Rice, J. C. Isenburger, H. R., X-ray exposure charts

for steel, B., 44. Isenhour, J. H., practical de-airing [of

ceramic products], B., 1205. Isenhour, L. L., and Quaker Oats Co., furoic acid, (P.), B., 529.

Isensee, H., determination of oxygen in activation of alkaline-earth oxide cathodes, A., I, 316.

Isgarischev, N. A., zinc and cadmium plating in the U.S.S.R., B., 453.

and Grigoriev, N. K., electrolytic preparation of lead and zinc from their sulphides, A., I, 144.

and Majorova, E. J., electrode processes of deposition or solution of metals,

A., I, 85.

Ishaq, M., the λ 2708 and 2756 bands of

OD, A., I, 392.
Isherwood, F. A. See Haworth, W. N.
Isherwood, I. R., lactic bacteria in relation to cheese flavour. I., B., 972.

Ishibashi, K., utilisation of Fushun green shale and refining of Fushun shale oil. X.—XII., B., 750.

Ishibashi, M., and Harada, Y., electrolytic determination of uranium and its recovery from the filtrate of sodium magnesium uranyl acetate precipitation, A., I, 634.

Ishibashi, M., and Tetsumoto, A., analysis by means of organic compounds. IV. Volumetric determination of nickel by dimethylglyoxime. V. Separation and determination of nickel and cobalt by means of dimethylglyoxime and sodium anthranilate. VI. Volumetric determination of copper by benzoinoxime, A., I, 633.

Ishida, K., and Miyaji, T., action of the nephrohormone in regulating water con-

tent of blood, A., III, 152.

Ishida, T., lead-silver anodes for chromium plating. I. and II., B., 797. Ishida, Y., collision of two oil drops and the stability of a non-spherical oil

drop, A., I, 441.
Fukushima, I., and Suetsugu, T., redetermination of the elementary charge by the oil drop method, A., I, 441.

Hiyama, S., and Kubota, H., Stark effect of ionised helium, A., I, 335.

Ishiguro, T. See Keimatsu, S. Ishihara, K., 2:8-dialkoxy-10-alkylaeridininm derivatives with various kinds of amino-group in the 5 position. XII. Synthesis of 5-alkylamino-2:8-dimethoxy-10-methylacridinium derivatives. XIII. Synthesis of 5-alkylamino-2:8-dimethoxy-10-ethylacridinium derivatives. XIV. Synthesis of 5-alkylamino-2:8-dicthoxy-10-methylacridinium derivatives. XV. Synthesis of 2:8-diethoxy-5-alkylamino-10-ethylacridinium derivatives. XVI. Synthesis of 5-m-aminoanilino-2:8-dialkoxy-10-alkylacridinium derivatives and 5:5'-m-phenylenebis(amino-2:8-dialkoxy-N-alkylaeridinium) derivatives,

A., II, 33, 211, 468. Ishii, C. See Nishina, Y.

Ishii, E., effect of internal temperature of gravity dams on strength of concrete, B., 785.

Ishii, M., effect of the vitamin-B complex from liver on tubercular patients, A., III, 302.

Ishii, R. See Wada, I.

Ishii, Y. See Kuwata, T.

Ishikawa, F., and Hasegawa, N., activity coefficient of thallous thiocyanate, A.,

and Morikawa, K., solubility and dissociation of lead chloride in solutions of potassium nitrate, A., I. 611.

and Watanabe, N., hyposulphite. VII. Reduction of hydrogen sulphite solution by sodium amalgam, A., I, 576. Ishikawa, H. Sco Kita, G., Suchiro, S.,

and Yamamoto, Kenichi.

Ishikawa, S., and Maeda, G., condensation of alcohols with benzene in presence of aluminium chloride, A., II, 405.

and Matsoura, T., synthesis of aldehydic isomerides of methylionone, A., II,

and Matsuhashi, M., synthesis of ethers of cugenol and isoeugenol, A., II, 413. Ishikawa, Tetsuya, viscosity of mixed salt solutions, A., I, 177.

Ishikawa, Tokuzo. See Toyama, Y. Ishimaru, S., determination of aluminium

in presence of iron, A., I, 264. Isida, Y. See Igarasi, S.

Isik, H. See Arndt, F. Iskenderian, H. P., Rankino magnetic balance and the magnetic susceptibility of H₂O, HDO, and D₂O, A., I, 451. Iskull, E. W. See Grigoriev, D. P. Isler, O. See Jacobs, W. A.

Ismail, A. M., and Harwood, H. F. use of hexamine for separation of thorium from the rare earths, and its application to determination of thorium in monazite sand, A., I, 265. Determination of potassium as potassium silver cobaltinitrite, A., I, 425

Ismailski, V. A., and Bogoslovski, B. M. decomposition of methoxymethyl salicylate; prismatio crystals of salicylic acid, A., II, 61. Auxo-enoid systems. IV. Colour of nitrobenzoyl derivatives of aromatic amines, A., II, 186.

and Simonov, A. M., structure and toxicity of arsinic acids of the diphenylamine series, A., II, 267. Colour of 2-nitrodiphenylaminc-4-arsinic derivatives containing additional auxogroups. I. Auxo-enoid systems separated from the chromophore, A., II, 267.

and Smirnov, E. A., auxo-enoid systems. II. Colour of nitrobenzoys derivatives of aromatic amines. III. Influence of position of nitro- and auxo-groups on colour of nitrobenzoylarylamides, A., II, 96. Colour of 2-nitrodiphenylamine-4-arsinic acidderivatives, containing additional auxo-groups. II. Colour of nitrobenzoyl derivatives of aromatic amines. III. Influence of position of nitro- and auxo-groups on colour of nitrobenzoylarylamines, A., II, 239.

and Stavrovskaja, V. I., peculiar type of crystal growth of certain 3-benzamido-4-methoxy-o-toluidine deriv-

atives, A., II, 185.

Isobe, H., bile secretion, A., III, 169. Isogal, N., oscillatory combustion in boilers,

B., 1285. Isolants Union, sound- or heat-insulating

materials, (P.), B., 97.

Isom, E. W., and Sinclair Refining Co., motor fuel, (P.), B., 874.

Israel, K. See Vosburgh, W. C Israel, R. G. See Stephenson, H. P.

Israel, S. L., and Mendel, T. H., excretion of gonadotropic substance in polycythemia vera, A., III, 402. See also Mazer, C.

Issoglio, G., mechanical viscosity of wheat flour, B., 384. Chemical control of

bathing-pool waters, B., 398. Itakura, T., coal-oil mixtures, B., 1292.

Itallie, L. van, Soma-Haoma, the holy plant of India and Persia, A., III, 107. Determination of time of administration in arsenical poisoning, A., III, 138. Blood spots, A., III, 249. Two cases of arsenical poisoning, A., III, 479.

and Steenhauer, A. J., subacute arsenic poisoning, A., III, 138.

Itami, $K_{\cdot,\cdot}$ nutritive value of yeast as a supplementary substance in diet of

infants. I., A., III, 152. Itano, A., and Matsuura, Akira, nodule bacteria. VI. Influence of different parts of plants on growth of nodule bacteria. VII. Influence of extracts of nodules, A., III, 146.

and Tsuji, Y., spontaneous studies of soils. II. Influence of temperature on micro-organisms, B., 477. Micro-biology of tea. I. Determination of micro-organisms on fresh tea leaves and those in different stages of manufacture, B., 480. Agar solidity tester, B., 592.

Itenberg, A. See Vanscheidt, A.

Iterson, F. K. T. van, separation of substances by flotation. I. and II., B., 400, 513.

Iterson, G. van, jun., structure of wall of alga of the genus Halicystis, A., III, 80. Hevea brasiliensis as a producer of rubber, B., 159.

Ito, K. See Yamamoto, R. Itō, N. See Kotake, Y., jun. Ito, T., and Inuzuka, H., microphotometric

study of X-ray powder diagrams of certain felspars, A., I, 383.

Ito, Takeo, surface activity and adsorbability of amino-acids. VIII., A., I,

Suginome, H., Ueno, K., and Watanabe, S., pigment of Kerria japonica, DC. A., III, 107.

Ito, Tomoyoshi, celluloses. II. Analysis of larches from Honshu, Korea, and Hokkaido, B., 225.

and Fukuda, Y., celluloses. III. Analysis of cellulose woods; spruce and fir from Manchukue, B., 225.

Itô, U. See Hatta, S. Ito, Y., liquorice extract, (P.), B., 88.

Itoh, R., spectroscopy of purified enzymes. III. Lipase, urease, and tyrosinase, A., III, 96. Lipase. II., A., III, 353. Itterbeek, A. van, and Dingenen, W. van,

adsorption isotherms of hydrogen on charcoal between 90° and 50° abs. in connexion with desorption experiments, A., I, 357. Adsorption of oxygen on glass at liquid oxygen temperatures, A., I, 510. Determination of adsorption isotherms of hydrogen on charcoal between 90° and 50° abs. in connexion with desorption experiments, A., I, 510.

and Mariens, P., measurements with ultrasonics on velocity and absorption of sound at ordinary and at low temperatures, A., I, 230. Measurements on velocity and absorption of sound in various gases between 100° and -100°; influence of pressure on

absorption, A., I, 504. and Vereycken, W., Simon desorption method between temperatures of 90° and 40° abs. (influence of equilibrium pressure), A., I, 25.

Itterlein, E. A., stirring and mixing apparatus, (P.), B., 98. Grinding bar for singleand multiple-roller mills, (P.), B., 302.

Itzioka, F., proteolytic enzymes of rabbit's pancreas. I. Maceration juice of rabbit's pancreas and mucosa of small intestine. II. Pancreatic juice, A., III, 97. Trypsinpeptone ("tryptone"), A., Ill, 374. Iv, B. T., and Rassadina, E. N., corrosion

of wood and its prevention, B., 916.

Ivančenko, D. Sce Dědek, J. Ivanenko, D., and Sokolov, A., interaction

of heavy particles, A., I, 7. Neutrino theory of light, A., I, 110.

Ivanischtschenko, N. See Kabanov, B.

Ivannikov, P. J., influence of carriers on catalysts A. I. 142

catalysts, A., I, 143.

Ivanoff, A., influence of the characteristics of a plant on the performance of an automatic regulator, B., 399.

Sec also Kent, Ltd., G. Ivanov, A. G., control of steel for cutting tools, B., 563.

Ivanov, B. See Makarov-Semljanski, J. Ivanov, B. I., and Maximenko, B. N., oxidation of foam carbon [from aluminium cells] with air, B., 454.

Ivanov, B. V. See Lipkaschevitsch-Duvanova, J. T.

Ivanov, D., syntheses with magnesium [derivative of] sodium phenylacetate. V. Aliphatic organo-magnesium deriv-

atives, A., II, 244.

Ivanov, E. E., respiratory quotient of spermatozoa, A., III, 16. Non-carbohydrate metabolism in connexion with the motility of mammalian spermatozoa, A., IlI, 126.

Ivanov, K., action of formaldehyde on antibodies, A., III, 413.

Ivanov, K. I., and Krein, S., corrosion of boilers by products of combustion of fuels containing dichloroethane, B., 1285.

Ivanov, K. N., and Kudra, O. K., cathode precipitates formed at high current density, A., I, 603.

See also Feldman, J. A. Ivanov, L. A., and Chaternikova, L. N., [pine-tree] tapping trials in U.S.S.R. III., B., 368.

See also Chitarov, N. I.

Ivanov, M. P. Sce Vechsler, V. I.

Ivanov, (Mlle.) N., rapid determination of carbon dioxide in air, B., 191. See also Auger, V., and Michlin, D.

Ivanov, N. N., biochemical basis in plant breeding, A., III, 189. Micro-analysis of seeds without loss of germinating power, A., III, 246. Biochemical characteristics of [browing] barleys of the Soviet Union, B., 485. and Dodonova, E. V., absence of in-

vertasc from mushrooms, A., III, 221. Kurgatnikov, M. M., and Kirsanova, V. A., difference in structure of starch determined by the diastatic method,

A., III, 430.

Ivanov, P. N., and Romodin, G. A., oxidising power of basic open-hearth

slags, B., 444.

Ivanov, V., determination of aniline and other aromatic amines in presence of acylamines (formanilide, acetanilide, etc., and also diphenylamino) and small amounts of water, by means of acetic anhydride, B., 1017. Determination of o- in m-nitro-p-toluidine, B., 1017.

Ivanova, A. I. See Bitschkov, M. K. Ivanova, E. N. See Schpolski, E. V. Ivanova, G. See Puzanov, V.

Ivanova, L., utilisation of bile, pancreas, and castor cake in manufacture of detergents, B., 151.

Ivanova, N., range of constituent particles of bursts of ultra-penetrating rays, A., I, 6. Ivanova, N. P. See Kaschtanov, L. I. Ivanova, V., aqueous emulsions of fats, B., 364.

See also Makarov-Semljanski, J., and Zinoviev, A.

Ivanova, Z., influence of plasticisers on physico-chemical properties of cellulose

acetate films, B., 1320.

Ivanovics, G., and Bruckner, V., chemical nature of the immuno-specific capsular substance of anthrax bacilli, A., III, 250. Chemical and immunological mechanism of the infection and immunity by anthrax. I. Chemical structure of the capsular substance of Bacillus anthracis and of the serologically identical specific substance of Bacillus mesentericus, A., III, 294, 454.

and Erdös, L., nature of substance of membrane of the anthrax bacillus, A., 111, 226.

See also Bruckner, V.

Ivanovski, F. P., Schorina, E. D., and Dreitzer, I. G., conversion of carbon monoxide in presence of substances binding carbon dioxide, B., 906.

Ivanovsky, L., refractometrie measurements in the oil, fat, and related industries, B.,

Ivantscheva, E. G. Sce Pamfilov, A. V. Ivantzov, L. M., and Mandelstam, S. L., steeloscopic grading of alloy steels, B.,

Ivaschkevitsch, $K.\ D.$ See Magidova, $S.\ S.$ Ivastchenko, $J.\ N.$ See Kirsanov, $A.\ V.$ Iveković, H., examination of the air of the Sušak railway tunnel, B., 984.

and Dančević, L., analysis of thermal sulphur spring of Varaždinske Toplice, A., I, 51. Rapid volumetric determination of iodine in mineral water, B., 193.

Ives, H. E., and Briggs, H. B., optical constants of potassium, A., I, 285. Photo-electric emission from thin films of potassium, A., I, 285. Optical constants of sodium, A., I, 449.

and Clarke, W. J., use of polymerised vinyl acetate as an artists' medium, B., 61.

Ives, J. W. E., rotary pump for pumping adhesive fluids, (P.), B., 1290.
Ivie, J. O., and Richards, L. A., meter

for recording slow liquid flow, A., I, 268.

Ivy, A. C. See Bachrach, W. H., Beazell, J. M., Danforth, D. N., Ferguson, John, Freeman, Smith, Gray, J. S., Greene, R. R., and Voegtlin, W. L.

Iwadare, K., Fukunaga, S., and Kubota, B., formation of l-threose, A., II, 229.

Iwadô, M., distribution of calcium and magnesium in organs and tissues after administration of bile acids, A., III, 198. Bile acids in calcium metabolism, X. Calcium and potassium contents of the liver of splenectomised rabbits, A., III, 213.

Iwai, M. See Ueno, Sei-ichi. Iwakiri, I. See Yoshii, T. Iwamae, H. See Kondo, K.

Iwasa, Y., utilisation of soya-bean byproducts [syrup], B., 605.

Iwasaki, I., geochemical investigations of volcanoes in Japan. II. Chemical composition of the lavas of the volcano Oshima, Izu, A., I, 430.

Iwasaki, S., and Miyamoto, T., strength and allied properties of rayon in aqueous solutions, B., 1034. Wet strength of rayon in aqueous solutions of sodium hydroxide, sodium carbonate, soap, etc., B., 1320.

Iwasaki, T., constitution of ursodeoxycholic acid, A., II, 20.

Iwasaki, Y., lipase. III. Effect of ovarian follicular hormone on pancreatic lipase, A., III, 393.

Iwase, K., and Nishioka, U., equilibrium diagram of the system CaO, TiO₂, SiO₂-MnO,TiO₂, A., I, 186.

Iwata, B., regenerative stationary preheater, B., 399.

Iwata, H., nutritive value of pentosans. VIII. Xylan-decomposing bacteria, A., III, 487.

Iwata, Y., fermentation process for production of glycerin from cane juice, B, 486.

Iwatsuki, T. See Mimura, Y. Iwo, S., action of amino-acids on the isolated toad heart, A., III, 24.

Iyengar, A. V. V., spike disease of sandal (Santalum album, Linn.). XVII. Factors relating to the abnormal accumulation of carbohydrates in diseased tissue, A., III, 502.

See also Chibnall, A. C.

Iyengar, B. A. S., determination of iron in soil extracts and other biological media, A., III, 192. Iron mobilisation and plant growth in waterlogged soils, B., 820.

Iyengar, B. N., report of chemical section,

1933-4, B., 602. Iyengar, K. Y. S., fibrous tourmalines from the Mysore State, A., I, 383.

See also Swamy, S. R.

Iyer, A. V., minerals in pasture grasses in India, B., 1387.
Iyer, C. R. H., and Rajagopalan, R.,

determination of manganese in soils, B., 477. Rôle of manganese in soil fertility, B., 819.

Rajagopalan, R., and Subrahmanian, V., improved method of determining nitrogen in soils and plant materials,

B., 954. Iyer, P. V. S. See Raghavachari, T. N. S. Izard, E. F. See Du Pont de Nemours & Co., E. I.

Izard, Y. See Boivin, A. Izbekov, V. A., and Kosmati, E. S., extraction of ammonium sulphate from the Romen gypsum-bearing marls, B., 1043.

and Nishnik, A., aluminium iodide as a

solvent, A., I, 24, 456.
and Skobetz, E. M., decomposition
potentials of metallic chlorides and bromides in SnCl2 and SnBr2 as

solvents, A., I, 520. and Tschovnik, N. G., decomposition potentials of fused halides and their binary systems with a common cation, A., I, 520. Decomposition potentials

of metallic chlorides in fused AlCla and AlCl₃,KCl as solvents, A., I, 520. and Vovk, M. V., separation of indium from dust of the Konstantinov zinc plant, B., 570.

Sce also Delimarski, J. K.

Izmailov, N. A., and Sigalovskaja, K. K., dynamic activity of charcoal filters, A., I, 512.

Izmailova, N. A., effect of cooking on the stability of vitamin-C in vegetables. II., B., 835.

Izmestiev, P. V., application of calcium chloride solutions in the rectification of methyl alcohol, B., 875.

Izrailovitsch, J. I. See Maximenko, M. S.

J.

Jaanus, R. I. See under Janus, R. I. Jablczyńska-Jędrzejewska, H., and Domański, J., poisoning of hydrogen electrodes by hydrogen sulphide, A., I,

Jablczyński, K., vapour isotherms and condensation line of carbon dioxide. VIII., A., I, 176.

and Ciolek, S., coagulation of colloidal ferric hydroxide by mercury salts, A., I, 460.

and Jaworski, Z., influence of carbamide and mannitol on conductivity of potassium chloride, A., I, 139.

and Orlowski, W., invisible radiation in gaseous reactions. I., A., I, 113.

Jablonski, A., rules for fading of polarised

fluorescence. II., A., I, 63.

Jablonski, C. F., [determination] colouring matters in foods, B., 976. Jahoulay, E., rapid determination of cobalt

in steel, B., 793.

Jacchia, L., and Truffl, G., therapeutic action of arsenobenzene associated with sodium dehydrocholate, A., III, 216.

Jacek, W., velocity of solution of comminuted substances. II. and III. IV. Determination of the most commonly encountered values of the coefficient \(\xi \). V. Application of the simplified kinetic equation to substances readily soluble

in water, A., I, 88, 250, 468.

Jacewiczówna, J. See Pfanhauser, J.

Jachimowicz, T., partial synthesis musele-adenylic acid, A., II, 481. See also Barrenscheen, H. K.

Jachkind, A., and Gotgelf, N., cracks in round castings, B., 679.

Jack, E. L., and Dahle, C. D., electro-kinetic potential of milk fat. I. General electrophoretic studies, B., 1261.

See also Dahle, C. D.

Jack, R. W., water and fat contents of

tsetse flies, A., III, 87.

Jackson, A. See Howell, O. R.

Jackson, A. A. See Warne, L. G. G. Jackson, C., serum-precipitin in anaphylaxis in the rabbit, A., III, 5.

Jackson, C. H. N., water and fat content of tsetse flies, A., III, 252.

Jackson, C. J., Howat, G. R., and Hoar, T. P., discoloration and corrosion in canned cream, B., 180.

Jackson, C. M., recovery in rats on refeeding after prolonged suppression of growth by dietary deficiency of protein, A., III, 466. Food intake of young rats held at nearly constant body-weight by restriction of dietary protein, A., III, 467.

Jackson, C. V., wave-length standards in the first spectrum of krypton, A., I, 1.

Jackson, D. A., and Kuhn, H., hyperfino structure and Zeeman effect of resonance lines of silver, A., I, 272. Nuclear moments of aluminium, A., I, 485. Intensity ratios of the hyperfine structure components of the resonance lines of potassium, A., I, 539.

Jackson, D. T., and Parsons, J. L., sodium

chlorite as volumetric oxidising agent, A., I, 147. Simplified method for analysis of bisulphite [pulp] cooking

liquor, B., 769.

Jackson, E. I., and Hudson, C. S., application of cleavage type of oxidation by periodic acid to starch and cellulose, A.,

II, 487.

Jackson, E. L., and Hudson, C. S., cleavage of carbon chain of glucosides by oxidation; determining ring-structures and a- and β -configurations of glucosides, A., II, 325. Two forms of anhydrous l-rhamnose; preparation of crystalline B-tetra-acetate, A., II, l-rhamnose 325.

Jackson, E. R. B. See Hey, D. H. Jackson, G. J. See Woodall-Duckham (1920), Ltd.

Jackson, H. C. See Weckel, K. G. Jackson, J., de-frothing of foam baths,

(P.), B., 1140. Jackson, John M., and Tyson, H., energy exchange between a gas and a solid surface, A., I, 500.

Jackson, John Meadows, and Crude Oil Recovery Co., apparatus for reclaiming oil from hydrocarbon oil emulsion, (P.), B., 19.

Jackson, J. R. See Robbins, W. J.

Jackson, P. C., use of thyroxine in ophthal-mology, A., III, 42.Jackson, P. G., determination of minute

quantities of lead, A., I, 476.

Jackson, R. F., sugar products [fructose], (P.), B., 484.

See also Proffitt, M. J.

Jackson, R. W., and Short, R. F., anisoxide. I., A., II, 257.

Jackson, T. Seo Spun Glass, Ltd.

Jackson, T. H., apparatus for dehydration of tar emulsions, (P.), B., 319.

Jackson, W. See Gemant, A.
 Jackson, W. H., apparatus for treating liquids, (P.), B., 1148.

Jacob, A., physiological effects of potassium on plants, A., III, 237.

Jacob, (Miss) A. See Todd, A. R. Jacob, Anni. See Braun, J. von.

Jacob, K. D., and Tremearne, effect of removing water-soluble compounds prior to determination of citrate-insoluble phosphorus in fertilisers, B., 956.

See also Ross, W. H., and Whittaker, C. W.

Jacob, L. E. See Mackay, H. M. M. Jacob, P. See Standard-I. G. Co. Jacob, R. See Kirrmann, A.

Jacobi, G., production of a hydrogen continuum of high intensity by means of a hot-cathode tube, A., I, 53.

Jacobi, M. See Katzman, E. Jacobs, D. L., Dons, E. M., and Mid-Continent Petroleum Corp., cracking apparatus [for hydrocarbons] and its operation, (P.), B., 19.

Jacobs, F. M. Sce Burgers, W. G.
Jacobs, G. H., and Peters Cartridge Co., primer for ammunition, (P.), B., 296.

Jacobs, H. R., and Colwell, A. R., lesions in the pancreas and anterior pituitary with fatal acidosis following prolonged intravenous administration of glucose (in dogs), A., III, 178.

and Ricketts, H. T., retarded and pro-longed action of insulin precipitated

by safranine, A., III, 186.

Jacobs, J., serological reactions of azo-proteins derived from aromatic hydrocarbons and diaryl compounds, A., III, 117.

Jacobs, M. H., Glassman, H. N., and Parpart, A. K., osmotic properties of the erythrocyte. VIII. Nature of influence of temperature on osmotic hæmolysis, A., III, 449.

Parpart, A. K., and Corson, S. A., osmotic properties of the erythrocyte. IX. Effect of low concentrations of electrolytes on hæmolysis by penetrating non-electrolytes and on cell

volume, A., III, 449.

Jacobs, M. L., and Jenkins, G. L., use of solvents in alkaloidal assays. I. Solubilities and distribution coefficients of certain alkaloids in isopropyl ether and methylene chloride, B., 1267.

Jacobs, R. B., and Goetz, A., thermal expansion of the Bi lattice between 25° and 530° abs., A., I, 176.

See also Goetz, A.

Jacobs, T.L., isolation of $a\beta$ -diketones from ozonisation of disubstituted acetylenes, A., II, 11.

Jacobs, W. A., and Craig, L. C., ergot alkaloids. X. Ergotamine and ergoelavine, A., II, 38. Veratrine alkaloids. I. Degradation of cevine. II. Basic degradation products of cevine,

A., II, 355, 473. and Gould, R. G., jun., synthesis of substances related to Iysergic acid, A., II, 219. Ergot alkaloids. XII. Synthesis of substances related to lysergic acid, A., II, 434.

and Isler, O., sapogenins of Polygala

senega, A., II, 427.

Jacobsen, D. H., relation of aminonitrogen content to quality of cream and butter, B., 281.

Jacobsen, E., storage of ascorbic acid in organs of guinea-pigs after ingestion of the crystalline acid with a vitamin-C-

free diet, A., III, 78. Jacobsen, J. C., absorption of hard γ -rays by light elements, A., I, 58. Positrons from radio-scandium, A., I, 338.

Jacobsen, R. P. See Fieser, L. F.

Jacobsohn, K. P., nomenclature of enzymes acting on fumario acid, A., III,

and Pereira, F. B., stereochemical specificity of aspartase, A., III, 68.

and Soares, M., specificity of aspartase, A., III, 68. Hypothetical existence of enzymes analogous to aspartase, A., III, 220. Problematical existence of "ammoniacases," A., III, 312. Fumarases; existence of malic de-hydrase, A., III, 481.

and Tapadinhas, J., stereochemical problem of enzymic equilibrium; the fumarase system, A., III, 30.

See also Da Cumha, D. P., and Pereira-Forjaz, A.

Jacobson, B. H., and Klipstein Chem. Processes, cleaning and polishing composition [dentifrice], (P.), B., 94. Fluorescent solid composition, (P.), B.,

Jacobson, B. M., response of guinea-pig reticulocytes to substances effective in pernicious anæmia; biological assay of therapeutic potency of liver extracts, A., III, 11. Assay, on guinea-pigs, of hæmatopoietic activity of human livers; normal and pernicious anæmia, A., III, 11.

See also Subbarow, Y.

Jacobson, M. S., fat and total solids in (New England) farmers' milk delivered to processing plants, B., 1120.

Jacobsson, W. J. See Linde Air Products

Jacoby, M., and Adler, Siegfried, bloodclotting action of human milk, A., III, 120.

and Jakobowitz, R., calcium: magnesium ratio in serum, A., III, 413.

Jacqué, L., mechanical properties of steels treated by heated hydrogen under

pressure, B., 45. Jacquemain, R., and Moskovits, A., syntheses with iodo-silver nitrobenzoate

complexes, A., II, 148.

Jacques, A. G., kinetics of penetration.

XIV. Penetration of iodide into Valonia,

A., Ill, 328. Jacques, F. O., and Central Tool Co., manufacture of a tool, (P.), B., 931.

and Moulthrop, L. S., abrasive cutting tool, (P.), B., 931.

Moulthrop, L. S., and Harrington, S., cutting tool, (P.), B., 931.

Jacquesson, R., type of crystalline texture observed in aluminium wire subjected to alternating torsion, A., I, 501. Variations of internal friction of solids under the influence of thermal and mechanical treatments; influence of a stress, B., 1142.

Jacquet, P. A., application of electrolytic polishing to study of metallic deposits, A., I, 193. Structure of thin coatings of copper electrodeposited on crystalline copper, B., 452. Comparative properties of metallic surfaces polished mechanically and electrolytically, B., 454. Structure of [metallic] electrodeposits, B., 688. Microscopical method of studying electrodeposits, B., 930.

See also Capdecomme, L., and Lejeune, G.

Jacquinot, P., and Dupouy, G., variation of shifts with the field in the Zeeman effect of mercury, A., I, 2.

Jacquot, R. See Bonnet, R. Jacyna, V., temperature dependence of temperature-measuring quantities, A., I, 22. U-effect of Amagat and Weiss, A., I, 286. Mathematical foundation of the thermodynamical equation of state, A., I. 294.

Jadassohn, W. See Fierz-David, H. E. Jadhav, G. V., and Rao, S. N., derivatives of 1-hydroxy-2-naphthoic acid. II. 4 - Halogeno - 1 - methoxy - 2 - naphthoic acids and their derivatives, A., II, 149.

Rao, S. N., and Hirwe, N. W., derivatives of 1-hydroxy-2-naphthoic acid. I. 4-Halogeno-1-hydroxy-2-naphthoic acids and their derivatives. III. Arylamides and their bromination products, A., II, 149, 192.

Jadwiga, (Fraulein) B. See Hrynakowski, K.

Jaeckel, R., resonance of tungsten nuclei for capture of single neutrons and form of active resonance levels, A., I, 211.

Jaeger, A. O., oxidation catalysis: its influence and effect on leather chemis-

try, B., 162.

and Amer. Cyanamid & Chem. Corp., synthetic tanning material, (P.), B., 69, 1095. Esters of sulphodicarboxylic acids [wetting agents], (P.), B., 214. Contact sulphuric acid process, (P.), B., 237, 666. Coated catalysts, (P.), B., 343. Plasticiser, (P.), B., 700.

Jaeger, F., filter, (P.), B., 633.

Jaeger, F. M., relative and absolute spatial configuration of isomorphous optically active complex salts. I. Comparison of triethylenediamine and tricyclohexanediamine salts of tervalent cobalt and rhodium, II. Comparison of the tri-diamino-salts of cobalt, rhodium, and chromium, A., I, 170, 258. Relative and absolute spatial configurations of optically active tri-diamine complexes of chromium, cobalt, and rhodium, A., I, 445. Measurement of surface tension of melten salts and metals at high temperatures, A., I. 602.

and Berg, J. ter, ptcrotactic derivatives of bivalent platinum with optically active, cyclic trans-1:2-diamines, A.,

I, 423.

Berg, J. ter, and Terpstra, P., optical rotation and rotatory dispersion in solution and in the crystalline state, A., I, 555.

Jaeger, F. M., and Bijkerk, L., complex salts of racemic and optically active cyclohexanediamines with tervalent cobalt and rhodium. I. trans-1:2-Diaminocyclohexane and its fission into optically active antipodes. II. Complex tricyclohexanediamine - rhodium salts. III. Tridiaminocyclohexane salts of tervalent cobalt. IV. Crystallographic properties of optically active tricyclohexanediamine cobaltic salts and ethylenediamine cyclohexanediamine cobaltic salts of the series, A., I, 170, 259, 289; II, 237. Complex salts of tervalent cobalt, chromium, and rhodium with racemic and optically-active trans-I:2-diamiuocyclohcxane, A., I, 474.

Bottema, J. A., and Rosenbohm, E., specific heats of metals at high temperatures. XXVI. Specific heats and electrical resistance of cerium. XXVII. Specific heats and electrical resistance of lanthanum. XXVIII. Heat capacity and electrical resistance of didymium between 300° and 600°, A., I, 20, 405.

See also Berg, J. ter.

Jaeger, G., preparation of beryllium by electrolysis, (P.), B., 934.

and Deuts. Gold- & Silber Scheideanstalt vorm. Roessler, practically iron free compounds of the earth metals, alkaline earth metals, rare earth metals, earth acids, etc., (P.), B., 237.

Jäger, H., economic importance of lowtemperature treatment of coal in

Germany, B., 405. Jaeger, J. C., Bremsstrahlung, A., I,

Jäger, R., industrial skin affections and their prevention and cure by tanning the living tissues, B., 297. Jäkel, E. See Krause, O.

Jänecke, E., Roozeboom and partial pressuro curve methods of graphically representing liquid-vapour equilibria, A., I, 242.

Jaenicke, H., shortening the development time of photographic negatives, B.,

Jäppelt, A., determination of ash in raw materials for gasification, B., 311.

and Steinmann, A., technical-scale investigation of the reactivity of various gasification fuels, B., 513. Gasification of coke, semi-coke, and browncoal char, B., 638, 1294.

Järnefelt, H., effect of effluents from paperpulp factories on water and organisms in the river Wuoksi (Finland), B., 93.

Jaeschke, B. See Litzow, K. Jaffe, H. von R., polymorphism of Rochelle

salt, A., I, 121.

Jaffray, J., spectrum of discharge of hightension generators in air, A., I, 104. Stratified Geissler discharge in various gases at atmospheric pressure, A., I, 486.

Jagielski, A., dielectric polarisation of chloronitrobenzene in liquid state, A., I, 169.

Jagitsch, R., application of Hahn's emanation method to investigation of reactions in solid state. IV. Kinetics of calcium silicate formation, A., I, 623. Artificial sound- and heat-insulating material from diatomaceous earth, B., 1056.

Jahn, A. R., concentration of liquids, (P.), B., 5. Powder from liquids, (P.), B., 30I.

Jahn, E. C., chemical utilisation of waste wood, B., 1035.

Jahn, F. See Brintzinger, H. Jahn, F. P., preparation of azomethane, A., II, 449.

Jahn, H. A., and Teller, E., stability of degenerate electronic states in polyatomic molecules, A., I, 552. Stability of polyatomic molecules in degenerate electronic states. I. Orbital degeneracy, A., I, 552.

See also Childs, W. H. J.

Jahn, R., and Reisinger, C., uniformly finegrained castings from metals and metal alloys, (P.), B., 357.

Jahn, T. L., effect of agration and CO₂ lack on growth of bacteria-free cultures of protozoa, A., III, 34. Nature and permeability of grasshopper egg membranes. II. Chemical composition of membranes, A., III, 56. Population growth in protozoa, A., III, 144.

Jahns, H., quality of wheat varieties and of

mixtures, B., 487.

Jahre, R. See under Jahre Spezialfabr. für Kondensatoren, R.

Jahre Spezialfabrik für Kondensatoren, R., cells for electrolytic or electrostatic condensers or secondary batteries, (P.), B., 362.

Jaitschnikov, I. S., proteins of Festuca pratensis, A., III, 245.

Jakeman, C., and Fogg, A., lubrication of journal bearings in oxidising conditions, В., 753.

Jakimanski, V. V. See Nepenin, N. N. Jakob, M., heat transfer in evaporation and condensation, B., 195.

Jakobowitz, R. Seo Jacoby, M. Jakosky, J. J., and Electroblacks, Inc., electrode for electrothermal processes for production of carbon black, (P.), B., 254. Production of carbon black by thermal dissociation of organic materials, (P.), B., 1158.

Jakovlev, B., and Schantarovitsch, P. S., kinetics of oxidation of hydrides in the gaseous phase. III. Oxidation of hydrogen sulphide, A., I, 248, 312.

Jakovlev, D. See Palladina, O.

Jakovlev, I. A. See Kalaschnikov, S. G.

Jakovlev, P.J. See Malov, S.I. Jakovleva, A., fluorescence of N_2 and N_2^+ ,

A., I, 103. and Kondrateev, V., ultra-violet absorption spectrum of ozone, A., I,

Jakovleva, E. V. See Uschakov, M. I. Jakovtschuk, A. I., effect of ascorbic acid on the oxidases of succinic acid and p-phonylenediamine, A., III, 311.

Jakschevitsch, F. A., non-metallio inelusions examined by means of a polarising microscope with a Fedorov table, B., 351.

Jakubson, S. I. See Plotnikov, V. A.

Jalas, S. See Simola, P. E.
Jalowetz, E., bright "quality-beer," B., 176.

Jalowy, B., and Malezynski, S., histochemistry of neutral fats and lipins of irradiated skin of normal, hypernephrectomised, and fasting animals, A., III, 388.

Jamar, F. Sco Gilard, P.

James, D. I. See Challenger, F.

James, F. W., Anderson, J. S., and Briscoe, H. V. A., interchange of hydrogen isotopes in complex cobaltammines, A., I, 145.

See also Anderson, J. S.

James, H., finishing of woollen hosiery material, B., 773.

James, H. M., and Coolidge, A. S., criteria of goodness for approximate wave functions, A., I, 391.

See also Coolidge, A. S.

James, J. H., and Byrnes, C. P., purification of oxidation products [for lubricant production], (P.), B., 115. Partial oxidation of hydrocarbons, (P.), B., 320. Treatment of partial [hydrocarbon] oxidation products, (P.), B., 524. Phenolic condensation products, (P.), B., 813. Partial combustion method for treating aliphatic hydrocarbons, (P.), B., 1169.

James, J. R., utilisation of pulverised fuel

fly ash, B., 1000.

James, L. H. See Hall, H. H. James, R. G. See Internat. Latex Processes, and Lastex Yarn and Lactron Thread, Ltd.

James, T. H., deuterium as an indicator of the course of chemical reactions, A., T. 40.

and Weissberger, A., autoxidation processes. X. Oxidation of desylamine and benzoin methyl ether, A., I, 623. James, W. M., lysozyme content of tears,

A., III, 253. James-Levi, M. J., galvanic determination of arsenic in iron ores and ironware, B.,

Jameson, E., phase-rule study of scrumproteins: effect of changes in certain variables, A., III, 336. Serum-protein changes occurring in degenerative stages of Bright's disease, A., III, 419.

and Roberts, D. B., phase-rule study of proteins of blood serum: comparison of proteins of human, rat, and horse

serum<u>,</u> A<u>.,</u> III, 111. Jameson, R. P., thermostat, (P.), B., 302. Jamet, A., qualitative tannin analysis, B., 1094.

Jamieson, G. S., and McKinney, R. S., composition of expressed lumbang oil, B., 1081.

See also McKinney, R. S.

Jamieson, J. See King, J. G. Jamieson, P. H., treatment of photographic images and materials for use therein, (P.), B., 501. Jamieson, W. A. See Jones, F. G., and

Powell, Horace M.

Jamison, E. A. See Andrews, F. H.Jamm, W., and Walter, K., light steel bottles for gaseous fuels, B., 563.

Jan-Khan, M. See Asundi, R. K.

Janatjeva, O. K. See Nikolaev, V. I., and

Voskresenskaja, N. K. Jancso, H. von. See Jancso, N. von.

Janeso, N. von, and Janeso, H. von, chemotherapeutic action and carbohydrate metabolism; curative effect of guanidine derivatives in trypanosome infection, A., III, 125. Mode of action of germanin in trypanosomiasis, A., III,

Jancu, L. See Dainow, I.

Janeura, C. G. Seo Aluminum Co. of America.

Janczak, W., centigram (semi-micro-) analysis of inorganic substances. IV. Analysis of chemical glass, B., 240.

Jander, G., and Immig, H., applicability of conductometric processes with visual observation in micro-chemical investigations. II. Titration of small amounts of chlorides by means of silver nitrate. III. Titration of small amounts of silver salts in presence of large amounts of lead salts by means of sodium chloride solution, A., I, 328. Chemistry in liquid sulphur dioxide. VI. Oxidation and reduction reactions, the formation of complex compounds, and amphoteric behaviour of sulphites in liquid sulphur dioxide, A., Ī, 527.

Knöll, H., and Immig, H., chemistry in liquid sulphur dioxide. IV. Thionyl diammonium compounds. (Coloured amidosulphinic acid derivatives), A.,

and Ruppolt, W., chemistry in liquid sulphur dioxide. V. Solubility of inorganic substances in liquid sulphur dioxide, A., I, 407.

and Ullmann, D., chemistry in liquid sulphur dioxide. III. Thionyl thio-eyanate and its "acidic" properties in pure sulphur dioxide solutions, A.,

and Wickert, K., chemistry in liquid sulphur dioxide, A., I, 81.

See also Harms, J., Immig, H., and Wickert, K.

Jander, W., reactions in the solid state. II. Course of reactions, A., I, 40.

and Bunde, K., reactions in the solid state at high temperatures. XIV. Intermediate state in formation of zinc aluminate from zinc oxide and aluminium oxide in the solid state, A.,

and Krieger, A., equilibria between metals, sulphides, and silicates in the melt. V. Equilibria Fe + CoO ⇒ Co + FeO and Ni + CoO \(\Rightarrow\) Co + NiO in the melt, A., I, 308. Determination of oxygen in metals, B., 575.

and Striebich, H., equilibrium PbCl2 + $Sn \rightleftharpoons SnCl_2 + Pb$ in melts, A., I, 243.

Jané, A. M. See Artigas, C. M.Janensch, I., turbidities in bright beers due to lactic bacteria and sarcina, B., 76. Pasteurisation haze in bright beer, B.,

Janett, H., and Celanese Corp. of America, [embossed] plastic material [artificial leather], (P.), B., 158. Janett, S. See Waser, E.

Janetzky, E. See Arkel, A. E. van.

Janicki, $J_{\cdot,\cdot}$ refractometric determination of trypsin, A., III, 180. Oxidationreduction potential of aqueous extracts of germinating barley, A., III,

and Assenhajm, D., lipins of different protein fractions of blood-serum, A., III, 290.

Janiszewski, Z. See Urbański, T.

Janke, A., and Herzog, F., determination of barley extract, B., 1115. Comparative viscometric studies of various commercial amylase preparations, B., 1395. and Siedler, V., acctone-butyl alcohol

fermentation, A., III, 396. and Tayenthal, W., nitrogen circulation.

III. Degradation of glycine by bacteria, A., III, 99.

Jankelevitsch, P., influence of admixtures on the mutual solubility of liquids, A., I, 509.

Jankelson, I. R. See Appel, B.Jankovic, A., effect of X-rays on chemical constitution of [human] blood, A., III,

Jankowski, H. See Moraczewski, W. von. Jankowski, Z. See Krause, A. Janning, A. See Kohl, H.

Janoff, A., tracks of H- and α-particles in light-sensitive emulsions, A., I, 338.

Janot, M. M., growth hormones in plants, A., III, 81. Growth phenomena in plants following injections of heteroauxin (β-indolylacetic acid), A., III,

and Faudemay, P., fats of "Russian" cantharides (Lytta vesicatoria, Fb.), A., III, 295.

and Tomesco, T. G., hydrogenation of glucosides in presence of active nickel, Å., II, 178.

Janota, J., jun., and Victor Chem. Works, dentifrice polishing base, (P.), B., 1282. Jansch, O., gas-insulating film on alumin-

ium electrodes, B., 149. Jansen, B. C. P., determination of ancurine (vitamin- B_1) by the thiochrome reaction, A., III, 77.

See also Dols, M. J. L.

Jansen, G. V., and Bain, J. W., chlorination of spruce wood and the resulting chlorolignin, B., 1186.

and Smith, E. H., effect of regain on rate of adsorption of stannic chloride by silk fibroin, B., 773.

Jansen, H. E., and Wibaut, J. P., bromination of quinoline, isoquinoline, thiazole, and benzthiazole in the gaseous phase, A., II, 350. Reactions of 2-bromo- and 3-bromo-quinoline, A., II, 350.

Jansen, L., and De Rosen, P., cooling of gas and condensation of water and naphthalene vapours in underground pipes, B., 1294.

Janson, A. J., tapping Caucasian fir in Trans-Caucasia, B., 368.

Janssen, P. See Archibald, F. M. Jantsch, G., electrometric methods of determining rare earths, A., I, 199.

Rarc carths, A., I, 372. and Gawalowski, H., potentiometric determination of rare earths, A., I,

Grubitsch, H., and Lischka, E., electrolytic conductivities of aqueous solutions of rare-earth halides, A., I, 364.

and Schuster, E., solubility of mcrcurous oxalate, A., I, 128.

and Wiesenberger, E., higher-valency compounds of the rare earths. II. Dysprosium oxide, A., I, 146.

Jantzon, H. See Kuhnke, A. Janus, R. I., and Salitra, J., magnetic method of testing superficial decarbonisation and structure of steel rods, B., 1062.

See also Droshina, V. I., and Schur, J. S. Januszkiewicz, M. See Machebæuf, M. A. Jany, J., soaking of dried hides, B., 1093.

Jaretzky, R., and Seyffarth, H.J., influence of nutrients containing different forms of nitrogen compounds on growth and saponin formation in Lychnis flos cuculi, L., and Saponaria ocymoides, L., B.,

Jarkovaja, L. M. Sec Tschajlachjan, M. C. Jaroslavtzeva, Z. A. See Kolobolotzkaja,

Jarrard, W. J., and Baird Television, Ltd., cathode-ray tubes [for television re-ceivers], (P.), B., 56.

Jarrell, T. D., Hankins, J. M., and Veitch, F. P., deterioration of book and record papers, B., 227.

Jarrett, T. C., [ageing of silver-rich] silvercopper-silicon alloys, B., 144. Silverindium alloys; ageing of silver-rich ones, B., 571.

See also Wrighton, W.J.Jarrousse, J., "di(phenylpyruvic acid)"; preparation of phenylbenzylsuccinie acids, A., II, 150.

Jarusov, S. S., mobility of exchangeable cations in soil, B., 706.

and Tzeitlin, I. S., causes of mobilisation of phosphoric acid by liming podsolic soils, B., 707.

Jarussova, N. S., accumulation of vitamin- B_1 in the animal organism, A., III, 231.

Jarvis, F., heating of steel for hardening, (P.), B., 580.Jarvis, F. N. See Munch, J. C.

Jary, S. G., tests of insecticides against Anthonomus rubi (Herbst.), B., 1107. and Austin, M. D., [report of] Department of Entomology, B., 273. "Meta-

fuel" and slug control, B., 1107. Martin, J. T., and Tattersfield, F., artificial drying of pyrethrum flowers, B., 1103.

Sec also Austin, M. D.

Jasaitis, Z. See Young, W. G.

Jasberg, P. See Keck, W. E.

Jashnova, N. V. See Bobko, E. V. Jashtschenko, V., hydrogenation tests [on

oils] in presence of nickel formate, B.,

Jasinovski, A. N. Sce Antipov-Karataiev,

Jasinskaja, G. I. See Varschavski, A. N. Jasirkina, N. I. See Volovik, B. E. Jasjukevitsch, S. M., and Chan, G. A., experiments on scorodite flotation, B., 49.

Jasnui, A., effectiveness of hydrogenation with the use of nickel formate at the Kazansk works, B., 586.

See also Kuptschinski, P.

Jaspers, J. M., constitution of Portland cement and development of its technical

properties, B., 442. Jaszczurowski, J. See Krupkowski, A. Jatkar, S. K. K., and Gajendragad, N. G., vapour-phase esterification equilibria,

A., I, 362.

Jatlov, V. S., Poljakova, E. M., and Podtimtschenko, E. P., chromium fluoride, its properties and industrial preparation, B., 1199.

Jatsenko, F., use of chloropicrin as a mosquito Iarvicide, B., 849.

Jatsuta, N. A., Kantorovitsch, L. M., and Klevke, V. A., preparation of calcium nitrate, B., 236. Jaulmes, C. See Binet, L.

Jaulmes, P., volatilisation with water vapour of volatile substances in solution, A., I, 136. Clarification with lime and determination of volatile acids of wine, B., 176.

and Galhae, E., volatility of boric esters in alcoholic solution, A., I, 136. Volatility of boric acid. II. Dry boric acid and superheated steam, A., I, 136.

and Gontard, (Mlle.) A., volatility of boric acid. I. Aqueous solutions, A.,

and Mazars, H., volatility of fatty acids in aqueous solution, A., I, 177.

Jaumann, J., and Kinder, E., electrostriction in highly compressed gases, A.,

Jauncey, G. E. M., and Bruce, W. A., atomic structure and vibrations in zinc crystals. IV. Diffuse scattering of Xrays at different temperatures. VI. Determination of electron asymmetry and the two principal characteristic temperatures, A., I, 447.

Jausseran, C., anomalies in the dispersion of light by colloidal solutions of silver, A., Ĭ, 409.

Grillet, L., and Duffieux, M., fine structure of the 5998.9 band of nitric oxide, A., I, 493.

Javier, B. P., effects on young sugar-cane plants of varying moisture content of

clay loam soil in pots, B., 169.

Javorovskaja, S. F. See Chomiakov, K. G.

Jaworski, Z. See Jabiczyński, K.

Jay, A. H. See Bradley, A. J.

Jayaraman, N., mineralogy and chemical composition of garnets from the schist complex of Nellore, A., I, 270. Jayle, G. See Derrien, Y.

Jayme, G., pulp purification in the light of the patent literature, B., 226. Development of pulp-strength testing, B., 769.

and Steinmann, R., change in swelling properties of pulps in the course of commercial processing methods, B., 1188.

Jayne, D.W., jun. See Amer. Cyanamid Co. Jeannerat, J. See Cherbuliez, E.

Jeanneret, R., vitamins in dental diseases, A., III, 342.

Jeannet, softening of industrial (process) water by trisodium phosphate, B., 507. Jeanprêtre, J., determination of sorbitol, A., II, 365.

Jeanprost, C., preservation of fermentable liquids, (P.), B., 78.

Jebsen-Marwedel, H., homogenisation processes in glass melts, B., 670. Corrosion in glass furnaces above the melt, B., 910. Local slag attacks on furnace refractories. B., 913. Effect of surface tension of attacking glass on tendency to stone and cord formation of refractory material.

Jefferies, E. J., simple super-centrifuge for continuous treatment of liquids, A., I,

Jeffery, G. H., and Vogel, A. I., dissociation constants of organic acids. XVI. Thermodynamic primary dissociation constants of alkylmalonic acids, A., I, 135.

See also German, W. L., and Vogel, A. I. Jeffkins, A. C. See Gen. Electric Co.

Jeffrey Manufacturing Co. See Armstrong, W. J., Fowler, J. T., Haworth, M. E., Nichols, R. D., and Seckendorff, E. W. Jeffreys, C. E. P. See Borsook, H.

Jeffreys, R. B., chemical wood pulp; investigations in Australia, B., 25.

Jeffries, C. D., mineralogical composition of the very fine sands of some Pennsylvania soils, B., 1095.

Jeffries, Z., Nagel, C. F., and Wood, R. T., light-weight structural alloys. I. Aluminium. II. Magnesium, B., 355.

Jehu, V. J., electrical conductivity of

barium chlorido and its variation with temperature, A., I, 31.

Jelen, F. C. See Jones, J.
Jelinghoff, W., contents of calcium and total solids in the bile of cadavers, A., III, 7. 1

Jelley, E. E., spectral absorption and fluorescence of dyes in molecular state, A., I, 63. Molecular, nematic, and crystal states of I:1'-diethyl- ψ -cyanine chloride, A., I, 291. Refractometer, (P.), B., 742.

See also Kodak, Ltd.

Jellinek, $E.\ M.$ See Looney, $J.\ M.$ Jemeljanova, L. See Tartakovskaja, V.Jenaer Glaswerk, Schott & Gen., heating vessel for the Pregl microdesiccator, A., II, 80.

Jenckel, E., vitreous state and artificial

resins, B., 1085.

and Hammes, H., size of bubbles of hydrogen from aluminium in hydrochloric acid, A., I, 571. Influence of small additions [of other metals] on the recovery temperature, grain size, and hardness of lead, B., 924.

and Mader, H., solid solubility of cadmium in lead and the absence of change in the lattice parameter of the lead,

A., I, 407.

and Thierer, C., rate of crystallisation and grain size of lead containing small additions of tellurium, lithium, and bismuth, B., 572.

and Woltmann, F., inhibition of the velocity of solution of aluminium in hydrochloric acid by pyridine derivatives, A., I, 524.

Jendrassik, L., and Cleghorn, R. A., photometric determination of bilirubin,

A., III, 108, 192.

Jeney, A. von, and Czimmer, A., action of quercitrin and quercetin on uninjured and poisoned frog's heart; vitamin- B_1 , A., III, 28.

Jenke, M., and Bandow, F., utilisation of fluorescence produced by sulphuric acid in determination of bile acids in blood, fæces, and urine, A., III, 447.

Jenke, R. See Possanner, B. von. Jenkins, C. E., and Thomson, M. L., distri-

bution of iron in the blood, A., III, 413. Jenkins, C. H. M., Bucknall, E. H., Austin, C. R., and Mellor, G. A., alloys for use at high temperatures. IV. Constitution of the alloys of nickel,

chromium, and iron, A., I, 508.

Jenkins, D. I. See Burkhardt, G. N. Jenkins, F. A., and McKellar, A., massratio of the lithium isotopes, A., 1, 488. and Wooldridge, D. E., mass ratio of the carbon isotopes from the spectrum of

CN, A., I, 542. See also Nolan, P.

Jenkins, F. G., zinc bronze-composition "G"; treating it for pressure-tightness, B., 246. Copper-lead bearing metals, B., 1220.

Jenkins, G. I., and Taylor, T. W. J., association of a-piperidone, A., II, 260.

See also Gregg, A.H.

Jenkins, G. L. See Bauer, J. C., Dunker, M. F. W., Goldstein, S. W., Jacobs, M. L., and Rice, R. V.

Jenkins, G. N. See Channon, H. J. Jenkins, H. G. See Gen. Electric Co.

Jenkins, H. O., and Bauer, S. H., application of the Raman-Krishnan theory to dipole moment measurements by the dilute solution method, A., 1, 115.

Jenkins, I. See Gen. Electric Co.

Jenkins, R. L., Hardy, G., and Swann Res. Inc., chlorinated diphenyl-sulphur [resin] mixtures, (P.), B., 263. See also Ballard, J. L., and Colbert, J. C.

Jenkins, R. O. See Benjamin, M.

Jenkins, R. R. See Tressler, D. K.

Jenkins, S. H., laboratory and large-scale experiments on purification of dairy wastes [milk wash-liquor], B., 505.

Jenkins Petroleum Process Co. See Smith, A. D.

Jenkner, A., increasing the benzol yield [from coke ovens], B., 1295.

Kühlwein, F. L., and Hoffman, E., lowtemperature carbonisation of bituminous coal, B, 862.

Jenks, H. N., [water purification] filter design as related to operation, B., 191.

Jenks, L. E. See Gen. Chemical Co. Jennen, J., maleo- and fumaro-nitriles, A.,

II, 90, 330. Ultra-violet isomerisation of fumaronitrile, A., II, 404. See also Brnylants, P.

Jenness, L. G., and Intermetal Corp., titanium dioxide, (P.), B., 909.

Jennings, C. H., how to weld twenty-nine metals, B., 794.

Jennings, G. H., and Southwell-Sander, G., anemia and agranulocytosis during sul-

phanilamide therapy, A., III, 459.

Jennison, H. C., and Amer. Brass Co., copper-base alloys, (P.), B., 250.

Jenny, H. See Garrison, E. R., and Gieseking, J. E.

Jensch, H., and Winthrop Chem. Co., quinoline derivatives, (P.), B., 289.

Jensch, R. G. See Barbaumov, N. J. Jensen, A. T., separation of calcium fluoride from super-saturated solutions, A., I, 611.

Jensen, D. G. See Hobart Manufg. Co. Jensen, E., reaction for manganese, A., 1, 427. and Jensen, V., effect of organic substances on the phenol coefficient [of

disinfectants], B., 846.

Jensen, H. (Baltimore), toad poisons; chemical constitution of marinobufagin, cinobufagin, and gamabufagin, A., II, 254.

and Chen, K. K., chemical identity of certain basic constituents present in secretions of various species of toads,

A., III, 9. Jensen, H. (Hamburg), specific oscillation of a Fermi gas and application of Bloch's retardation formula for fast particles, A., I, 493.

Jensen, H. B. See Biilmann, E.

Jensen, H. L., microbiology of Australian soils. III. Rossi-Cholodny method as a quantitative index of growth of fungi in soil: influence of organic matter on

soil microflora, B., 478.

Jensen, K. A., dipole measurements of isomeric plato-complexes. II. and III., A., I, 14, 322. Stereochemistry II. and of co-ordinative quadrivalent nickel, A., I, 14. Constitution of platinammines, A., I, 14. Stereochemistry of co-ordinative quadrivalent cobalt, A., I, 15. Constitution of organometallic bases and salts, A., I, 139. Crystal structure of (NH₄)₂SbBr₆, Rb₂SbBr₆, and Rb₂SbCl₆, A., I, 288. Constitution of the erythro- and rhocochromic salts, A., I, 373. Constitution of some additive compounds of tertiary amines and phosphines, A., II, 180.

and Frederiksen, E, constitution of platinum compounds of caeodyl oxide, A., I, 68. Complex compounds of 4phenylselenosemicarbazide, A., II, 95.

See also Bilmann, E. Jensen, K. E., sterile [ethyl] alcohol, B., Jensen, L. B., and Grettie, D. P., action of micro-organisms on fats, B., 937.

Jensen, V. See Jensen, E. Jentgen, H., continuous filtration of viscose, B., 1187. Increasing the spinning velocity of viscose staple fibre, B., 1187. Jentschke, W., ionisation measurements on single a rays, A., I, 57.

Jentzsch, K. See Wessely, F.

Jeppe, C. W. B., and Halliday, E. C.,

instrument designed to record continuously the amount of dust in air, B., 1413. Jerabek, P. E., and Lincoln Electric Co., electric arc welding, (P.), B., 692.

Jermolenko, N. F., solid phase rule (Bodenkörperregel) in peptisation of metal oxides, A., I, 138.

and Abramtschuk, N. A., surface salting out of surface-active substances by electrolytes and the stability of foams, A., I, 238. Frothing agents for light-weight concrete, B., 243. New froth formers [for concrete], B., 1344.

and Mirontschik, A., relation between dispersion of dyes and their adsorption

by briquetted coal, B., 199. and Novikova, E. N., dielectric properties of solvents and adsorption by mineral

suspensions, A., I, 358. and Schestakov, K., adsorption rule applied to briquetting of active charcoal, B., 312.

Jersey, V., and S.M.A. Corp., refining of fats and oils, (P.), B., 153.

Jeru, I. I. See Prokopetz, E. I.

Jerusalimski, N. D., and Bechtereva, M. N.analysis of fermentation gases, B., 720. See also Bechtereva, M. N.

Jerzmanowska-Sienkiewiczowa, Späth, E.

Jeschki, K., variation in composition of milk of individual cows, B., 970.

Jespersen, E. G. See Andreasen, A. H. M. Jespersen, J., and Petersen, F. H., lucerne meal and green lucerne for pig-feeding, B., 390.

Jespersen, J. C., and Larsen, K. T., detection of therapeutically important barbiturie acids, A., II, 118.

Jesse, W. P., variation of the atomic structure factor of nickel with X-ray wave-length, A., I, 590.

Jessen, W. See Suchting, H.
Jesser, H., and Thomae, E., iodine-air investigations, A., I, 636. Edible oils, B., 58.

Jesser, L., setting of cement as an electrostatic phenomenon, B., 242.

Jesserer, H., and Lieben, F., the biuret reaction. IV. Combination of copper, nickel, and cobalt with proteins, A., II, 478.

See also Kretschmayer, R.

Jessup, R. S., heats of combustion of liquid normal paraffin hydrocarbons from hexane to dodecane, A., I, 244.

Jesty, L. C. See Gen. Electric Co. Jeuck, F.J. Sec Internat. Printing Ink Corp. Jevons, J. D., lubricants employed in deep drawing, B., 575. Season-cracking of brass, B., 683. Properties of sheet metal, B., 1355.

Jevons, W., and Bashford, L. A., ultra-violet band systems of SnBr and SiBr, A., I, 596.

Bashford, L. A., and Briscoe, H. V. A., ultra-violet band systems of GeCl and GeBr, A., I, 596. Ultra-violet band systems of germanium monoxide, A., I, 596.

Jevons, W. See also Bashford, L. A. Jewett, E. C. See Eastman Kodak Co. Jewitt, T. N. See Fraser, R. G. J. Jewson, F. T., water analysis, B., 192.

Jha, J. B. See Maheshwari, G. I.

Jilek, A., and Koudela, G., mercurimetrie determination of iodides in presence of diphenylcarbazide as indicator, A., I,

and Laubová-Sklenářová, O., analytical separation of lead from Mg", Ca", Sr", Ba", and Tl' by means of carbon dioxide in pyridine solution, A., I,

Jillings, B. V., testing bacteria-proof filters, A., III, 277.

Jimenez Diaz, C., Addison's disease (functional renal failure), A., III,

Bielschowsky, F., and Castro Mendoza, H. J., mechanism of absorption of fats

and lipins, A., III, 211.

Jinkings, \bar{A} . J., and McGraghan, L., stability of sodium perborate solutions and their use for the bleaching of cotton fabrics, B., 1334.

Jirak, L., evaluation and preservation of

hen eggs, B., 491

Jirkovský, R., application of Feigl's drop reactions to analysis of assay beads, A., I, 200. Purity tests in assaying by means of spot tests, B., 1355.

Jirsa, F., electrolysis of aqueous solutions of ammonium bromide, A., I, 192.

Jitariu, P., comparative determinations of urea in blood and in pericardiac fluid of Rhombus maeoticus and Trygon pastinaca. A., III, 195.

Joachim, A. W. R., and Kandiah, S., Ceylon soils. VII. Characteristics of further

important soil groups, B., 702.

Joachim, B., applied paint and varnish chemistry for the chemist and the layman, B., 62.

Jobling, J. W., and Sproul, E. E., relation of viruses to active agent of the Rous chicken sarcoma, A., III, 228.

Jochelson, D. B., determination of hexamethylenetetramine in medicines, B., 839.

Jockers, K. See Schwab, G. M. Jockersh, H. See Bodenstein, M.

Jodidi, S. L., maturity test of peas, B., 823.

Joët, E. See Meersseman, F.

Jørgensen, G., determination of phosphate by weighing the molybdenum precipitate, A., I, 44, 261.

Joessel, P. H., and Lidoyne, A., chlorosis control of peach trees, B., 825.

Jofa, Z., Frumkin, A., and Tschgunov, P., phase-boundary forces at the boundary gas-liquid. V. Halogen-substituted aliphatic acids, A., I, 25.

Jofan, S. S. See Bosin, A. G. Joffe, A. T. See Joffe, A. V.

Joffe, A. V., and Joffe, A. T., spectral distribution of inner photo-effect in cuprous oxide, A., I, 347.

Joffe, J. S., reaction between 1-bromo-βnaphthol and benzenediazonium salts, A., II, 13. Diaryls and their derivatives. XIII. Azo-dyes from 6:6'-di-amino -2:2'-dihydroxy-1:1'-dinaphthyl, A., II, 287. Order of introduction of new substituents into the naphthalene nucleus, A., II, 373. Pedology of soils in New Jersey, B., 593. and Fedorova, N. M., bromination of

2:7-dihydroxynaphthalene, A, II, 15.

Joffe, J. S., and Gorelik, I. S., diaryls and their derivatives. XIV. Ring-closure in 6:6'-dinitro - 2:2'-dihydroxy - 1:1'-dinaphthyl, A., II, 376.

and Kolodny, L., fixation of potassium in

soils, B., 1099.

and Lenartovitsch, E. T., reaction of p-phenylenediamine and its derivatives with diazonium salts. II. Reaction of diphenyl-o-phenylenediamine with diazotised metanilic acid and o-chloroaniline, A., II, 376.

Joffe, M. See Rogovin, S.

Jogarao, C. V., optical investigation of some Indian oils. I. Depolarisation of the scattered light. II. Raman effect. III. Intensity of the scattered light, A., I, 10, 220; B., 152. Optical method of determining the relative coagulating powers of electrolytes, A., I, 303.

Joglekar, M. S., Raman spectra of some

chloroformates, A., I, 549.
See also Thatte, V. N.
Johannessohn, F., Thron, H., and Rare Chemicals, a compound of a-methylheptylhydrocupreicine, (P.), B., 1272. Johannsen, F., and Krupp Grusonwerk

A.-G., treating ferriferous ores, (P.), B., 248. Wrought iron, (P.), B., 799.

Johanssen, J. K., flotation of non-sulphidic minerals, B., 1354.

Johansson, C. H., potentiometer for measuring small e.m.f. and resistances, A., I, 428.

and Hagsten, O., hysteresis between decomposition and re-formation of a homogeneous metallic phase, A., I,

phansson, D., testing chemical and mechanical pulp, B., 1321. Johansson,

Johansson, R. See Bäckström, H. Johlin, J. M., attenuation of insulin by

interfacial adsorption, A., III, 438. John, Hanns, solutions of glucosides and alkaloids which are insoluble or only sparingly soluble in water, (P.), B., 621.

and Beetz, P., carvacrol. VI. Removal of the isopropyl group. VII. Halogenoacylmethylisopropylphenols, A., 11, 457,

John, Hans, Le Febvre, C. C., Du Bois, H., and Paper Patents Co., bleaching of pulp, (P.), B., 230.

John, W., cumotocopherol, a new factor of the vitamin-E group, A., III, 497.

John, W. C., and Evans, E. J., Hall effect and some other physical constants of IV. Silver-tin series of alloys, A., I, 406.

John, W. D., esparto wax: its use in manufacture of modern polishes and shoe-finishing requisites, B., 587.

Johns, H. E., and Wilhelm, J. O., refractive indices of liquid oxygen, nitrogen, and

hydrogen, A., I. 499.

Johns-Manville Corporation. See Badollet, M. S., Collier, S., Cummins, A. B., Driscoll, J., Holcomb, H. E., Pond, T. C., Rourke, R. K., Stafford, W. L., and Wirberlauer, W. L.

Johnson, A., and Combustion Utilities Corp., oil gasification process, (P.), B.,

Johnson, A. A. See under Johnson & Co.,

Johnson, A. H., Trebler, H. A., and Sealtest System Labs., dry soluble chlorine compound, (P.), B., 342.

Johnson, A. S., and Nat. Carbon Co., dry cell, (P.), B., 55.

Johnson, C., and Atkinson, R. H., platinum and allied metals, B., 796.

and Oakite Products, cleaning of metal [cold-rolled steel] surfaces, (P.), B.,

Johnson, C. A., and Bradley, W. B., preparation and antigenio properties of globin from hæmoglobins of different species, A., III, 116.

See also Boomer, E. H.

Johnson, Carl H., and Cain, R. A., leaf oil of Douglas fir, B., 1133. Bark oil of Douglas fir, B., 1133. Wood oil of Douglas fir, B., 1268.

Johnson, Christopher H., and Poynton, N. H., absorption spectra, optical activity, and isotopic exchange, A., I, 342. See also Hamblin, F. T

Johnson, C. J., Bunsen burner, (P.), B., 1150.

Johnson, E. A., and Steiner, W. F., astatic magnetometer for measuring susceptibility, A., I, 536.

Johnson, E. M., Knight, E. C., and Walker, T. K., mechanism of formation of organio acids by mould fungi. II, Action of Aspergillus niger on glucose in presence

of sodium iodoacetate, A., III, 315.

Johnson, E. R., Snyder, C. C., and Whitmer, V. W., alloy steel for [petroleum-]

refinery equipment, B., 1215.

Johnson, E. R. H., Willey & Co., and United Gas Industries, lubrication of bearings, (P.), B., 115.

Johnson, E. S., and Calco Chem. Co., [vanadium] catalyst [for sulphur dioxide oxidation], (P.), B., 239. hnson, F. See Crawford, W. P.

Johnson, F. See Crawford, W. P. Johnson, F. H., oxygen uptake of marine bacteria, A., III, 35. Improved Thunberg technique for bacterial oxidations, A., III, 318. Hexose oxidation by luminous bacteria. I. Effect of some natural and synthetic glucosides and related substances, A., III, 486. Aërobic oxidation of carbohydrates by luminous bacteria: inhibition of oxidation by certain sugars, A., III, 486.

and Harvey, E. N., osmotic and surface properties of marine luminous bacteria, A., III, 486.

Johnson, F. R., cleaning composition, (P.), B., 942.

Johnson, F. W. See Du Pont de Nemours & Co., E. I.

Johnson, G. E., Donahue, T. H., and Anaconda Lead Products, Co., composite [lead-titania] pigments, (P.), B., 1242.

Johnson, G. H. See Johnson, M. J. Johnson, G. W., dry-cleaning, etc., (P.), B., 231.

See also I. G. Farbenind.

Johnson, H. See Schilling, E. W. Johnson, H. H. See Schwartz, H. A. Johnson, H. L. See Coleman, G. H.

Johnson, H. W., effect of leaf hopper yellowing on carotene content of lucerne,

Johnson, $J_{\cdot,\cdot}$ factors relating to control of ordinary tobacco mosnic, B., 604.

Johnson, J. B., non-ferrous metals used in aircraft, B., 50. Aircraft engine materials, B., 575.

Johnson, J. C., and DeLong, W. A., boron content of apples at different stages of development, A., III, 237.

Johnson, J. J., use of isopropyl ether in a modified Mojonnier fat test, B., 1398. and Ormond, J. I., factors affecting

variation in fat content of ice cream mix and the finished product, B., 490.

Johnson, K. C. See Smith, L. I. Johnson, L. R., mercuric chloride for prevention of potato sickness, B., 72.

Johnson, L. W., bright nickel-plating, B., 452.

Johnson, M. C., and Vick, F. A., modification of apparent thermionic constants for oxygenated tungsten by temperature variation of adsorptive equilibrium, A., I, 273. Thermionic approximations to gas-covered fraction of an adsorbing surface, applied to temperature dependence of oxygenation and oxidation of a tungsten filament, A., I, 436.

Johnson, M. H., jun., reaction of deuterium

on deuterium, A., I, 341. and Primakoff, H., relations between the second- and higher-order processes in the neutrino-electron field theory, A., I, 278.

See also Halpern, O.

Johnson, M. J., Johnson, G. H., and Peterson, W. H., magnesium-activated leucyl peptidase of animal erepsin, A., III, 68.

See also Berger, J.

Johnson, Nils G., effects of chemical combination with oxygen and fluorine on the $Ka_{1,2}$ doublet of the lighter elements [No to Cl], A., I, 55.

Johnson, Norman G. See Du Pont de

Nemours & Co., E. I.
Johnson, Oliver W. See Williams, P. S.
Johnson, Oscar W., removable containers for centrifugal extractors, (P.), B., 304.

Johnson, P. E. See Bauer, F. O.
Johnson, P. R. See Reynolds, E. B.
Johnson, R. E., and Edwards, H. T.

lactate and pyruvate in blood and urine after exercise, A., III, 212. See also Anderson, E. O.

Johnson, R. F. See Woods, E. Johnson, R. I. See Clayton, W.

Johnson, R. P., design of concrete mixes for Mississippi river dams, B., 1344. See also Koller, L. R., and Seitz, F.

Johnson, R. P. A., selection of wood for industrial uses, B., 915.

Johnson, R. W., and Golenternek, J., configurations of a- and β -p-bromobenzophenoneoximes, A., II, 153.

Johnson, S. J. See Pappenheimer, A. M.,

Johnson, S. R., Hogan, A. G., and Ashworth, U. S., utilisation of energy at different levels of protein intake, B., 284. See also Hogan, A. G.

Johnson, S. S., jun., and Kellogg Co., M. W., distillation of petroleum under

vacuum, (P.), B., 646.

Johnson, S. W., and Zilva, S. S., oxidation of l-ascorbic acid by plant enzymes, A., III, 138. Relation between rate of enzymic oxidation and stereochemical structure of ascorbic acid and its

analogues, A., III, 392.

Johnson, T. B., purines in the plant kingdom; new purino in tea, A., III, 446.

Sec also Sprague, J. M. Johnson, T. H., and Read, D. N., automatic coincidence counter measurements on shipboard of the cosmic-ray latitude effect, A., I, 545.

Johnson, T, W., and Taylor, S. S., oxidation of oil in two air- and air-gas-repressuring projects, B., 866.

See also Taliaferro, D. B., jun.

Johnson, V., mathematical expression of charge distribution in a space lattice, A., I, 492.

Johnson, W. A. See Gen. Electric Co. Johnson, William A. See Krebs, H. A. Johnson, W. C., and Pechukas, A., hydrogen compounds of arsenic. I. Preparation of arsine in liquid ammonia; physical properties of arsine. Sodium and potassium dihydrogen arsenides, A., I, 628.

Johnson, W. G., pulveriser, (P.), B., 1146.
Thermal conductivity of metals [and alloys] at elevated temperatures, B.,

1356.

Johnson, W. H. See Combe, A. C.

Johnson, W. T., jun. See Frazier, W. C. Johnson, W. W., and Sinclair Refining Co., coking of hydrocarbons, (P.), B., 1301.

Johnson & Co., A., iron sponge, (P.), B., 253.

Johnson & Johnson (Gt. Britain), Ltd., heat-hardening of synthetic resins on fabrics, (P.), B., 32.

Johnson, Matthey & Co., Ltd. See Powell, Alan R.

Johnson Oil Refining Co. Seo Frey, F. P. Johnstin, R. See Viltner, S. P. Johnston, A. See Burns, R. H.

Johnston, C. G. See Riegel, C., and Schoenheimer, R.

Johnston, E. F., [cellulose] lacquer, (P.), B., 264.

Johnston, E. S., phototropic response and carbon dioxide assimilation of plants in polarised light, A., III, 367. See also Burkholder, P. R.

Johnston, F. D. See Kenny, M. Johnston, H., application of materials to gasworks construction, B., 746.

Johnston, H. L., deuterium as a research teol in the physical and biological sciences, A., I, 319.

Johnston, H. IV. See Edwards, J.

Johnston, J., some aspects of steel chemistry, B., 575.

See also Fenwick, F. Johnston, J. A. See Hummel, F. C. Johnston, J. E. See Skinner, H. W. B. Johnston, M. W. See Newburgh, L. H. Johnston, N. See Jones, B. A.

Johnston, R. P. Sec Longwell, B. B. Johnstone, C. See Ross, J. D. M.

Johnstone, H. F., and Illinois University, removal of catalysis inhibitors from aqueous solutions, (P.), B., 37.

and Singh, A. D., recovery of sulphur dioxide from waste gases; design of scrubbers for large quantities of gases, . B., 737.

Johswich, F., heat of coking of coal containing various percentages of water

and of mixed coals, B., 861.

Jois, H. S., and Manjunath, B. L., derivatives of psoralene, A., II, 207.

Jokisch, R. See Abel, E. Jolibois, P., and Bossnet, R., spark discharge at the surface of an electrolyte connected to the negative pole, A., I, 110. Quantitative analysis of metallic solutions with the spectrograph, A., I, 374.

and Fouretier, G., basic salt concept in the sexavalent uranium series, A., I,

Joliot, F., constitution of matter and artificial radioactivity, A., I, 59.

Joliot-Curie, I. See under Curie, (Mme.) I. Jolkin, V. See Glazunov, A.

Jolles, A., determination of sucrose (especially small quantities) in mixtures with reducing sugars, B., 175.

Jolles, E., special transformation of

phenylhydroxylamine derivatives, A., II,

Jolly, V. G., corrosion and paint, B., 369.

Jolson, L. M., accuracy and cost of determination of lead by various methods, A., I, 199. Apparatus for rapid determination of moisture by the carbide method, A., I, 333. Analysis of cyanide melt, B., 1043.

Djaditscheva, E. J., and Ginsburg, L. B., rapid determination of sulphide sul-

phur, B., 1335.

and Dubovitzkaja, E. I., rapid determination of zine in sulphide copper ores, concentrates, and tailings, B., 340. Rapid determination of cyanide in cyanide melt, B., 435.

Dubovitzkaja, E. I., and Graf, E. K. rapid determination of silicic acid and calcium oxide in copper slags, B., 352.

and Strishevski, I. I., determination of traces of acetylene in oxygen, B., 665. Strishevski, I. I., and Bergelson, A. B., determination of traces of acetylene

in oxygen, B., 665. and Tall, E. M., rapid determination of lead, A., I, 199.

and Voronova, A. I., rapid determination of copper in copper sulphide ores and concentrates, B., 448.

Joly, J. M., determination of basal metabolism in the rat, A., III, 16. See also Lecoq, R.

Joly, (Mlle.) Magdeleine, comparative action of magnesia on sugars and glucosides, A., II, 229.

Joly, Maurice. Seo Dervichian, D. G.

Jónás, J. See Szebellédy, L. Jonelis, F. G. See Bailar, J. G., jun. Jones, A., leather finishes, B., 811. Finish-

ing slate, B., 1087.

Jones, A. D. Seo Freundlich, H.

Jones, A. M., and Schlapp, W., action and fate of injected posterior pituitary extracts in the decapitated cat, A., III. 150.

See also Giles, A. W.

Jones, Brinley, metallography and mechanical properties of lead, B., 924. Lead extrusion phenomenon, B., 924. Nitrogen-hardening of high-chromium and austenitic steels, B., 1060.

Jones, Brynmor, halogenation of phenolic ethers and anilides. VIII. Alkoxy and dialkoxy-benzophenones and dialkoxydiphonylsulphones, A., II, 65.

Jones, B. A., Johnston, N., and Firestone Tire & Rubber Co., viscosimeter, (P.), B., 307.

Jones, C. B., and Dn Vigneand, V., synthesis of hexocystine and hexomethionine and their physiological availability, A., II, 403.

See also Du Vigneaud, V. Jones, C. C., time delay circuit for operating Wilson cloud chambers, A., I, 582. See also Mott, G. A.

Jones, C. L. See Rodman, C. J. Jones, C. N. See Woollett, G. H. Jones, C. W., sulphur refining process, (P.), B., 1337.

Jones, D. B., Horn, M. J., and Gersdorff, C. E. F., selenium and cystine content of partial hydrolysis products of gluten from toxic wheat, B., 385.

and Phillips, S., protein content of the bark of black locust, Robinia pseudacacia, A., III, 244.

See also Csonka, F. A.

Jones, D. M. See Marker, R. E., and Whitmore, F. C.

Jones, E. H., and Williams, Stanley, uniting metal parts by casting, (P.), B., 1071.

Jones, E. M. See Bailar, J. C., jun.

Jones, E. R. H., and Spring, F. S., sterol

group. XXVIII. Application of Reformatsky reaction to 7-ketocholesteryl acetate: 45-cholesteno-3:7-diol-7-acetic acid, A., II, 150.

See also Heilbron, I. M.

Jones, E. T., electrostatic energy as the mutual energy of vibrating particles, A., I, 15. Recent advances in physical science, A., I, 71. Properties of certain vibratory doublets, A., I, 546.

Jones, F. A. See Dunlop Rubber Co. Jones, F. G., and Jamieson, W. A., tet-. anus toxoid. III. Antitoxic response in guinea-pigs immunised with tetanus alum-precipitated toxoid followed by tetanus spores, A., III, 197.

Jones, F. L., and Galloway, W. R., sparking potential of mercury vapour, A., I, 54. and Willott, W. H., secondary emission from copper due to slow positive ions of argon, A., I, 3.

Jones, F. R., water conditioning for steam generation, B., 1.

Jones, F. T., and Mason, C. W., microscopical quantitative analysis of antimony and bismuth; tetraethylammon-

ium iodide as a reagent, A., I, 48. Jones, F. W., and Lipson, H., adjustable specimen holder for a Debye-Scherrer

camera, A., I, 378. and Sykes, C., the superlattice in β -brass, A., I, 559.

See also Sykes, C.

Jones, G., and Christian, S. M., viscosity of aqueous solutions of electrolytes as a function of the concentration. V. Sodium chloride, A., I, 237.

and Prendergast, M. J., measurement of conductance of electrolytes. VIII. Re-determination of the conductance of Kohlrausch's standard potassium chloride solutions in absolute units, A., I, 309.

and Ray, W. A., surface tension of solutions of electrolytes as a function of concentration. I. Differential method for measuring relative surface tension, A., I, 126. Surface tension of deuterium oxide and of its mixtures with water, A., I, 446.

and Stauffer, R. E., viscosity of aqueous solutions of electrolytes as a function of the concentration. IV. Potassium ferrocyanide, A., I, 126. Drainage error of viscosimetry of aqueous solutions, A., I, 584.

Jones, G. C., protective coatings on aluminium and its alloys, (P.), B., 1362.

Jones, G. D. See Herman, H. A. Jones, G. D. O. See Edwards, J.

Jones, G. R. See Husa, W. J.
Jones, G. W., Campbell, John, Goodwin,
F. M., and Huff, W. J., investigations during 1935 of combustibles in manholes in Boston, Mass., B., 10.

Jones, G. W. Sec also Hooker, A. B., and Scott, G. S.

Jones, H., phase boundaries in binary alloys. I. Equilibrium between liquid and solid phases. II. Theory of the α , β phase boundaries, A., I, 357.

and Mott, N. F., electronic specific heat and X-ray absorption of metals, and some other properties related to electron bands, A., I, 590.

Jones, H. A., optical rotatory power of extracts of derris and cubé roots, B., 481. Determination of rotenone in derris and cubé; crystallisation from extracts, B., 840.

Sec also Bisson, C. S.

Jones, H. D. See Wilkins, W. E. Jones, H. R. See Dryden & Sons, T.

Jones, J., and Jelen, F. C., conductance of aqueous solutions as function of concentration. II. Potassium ferrocyanide, A., I, 138.

Jones, J. A., quench-ageing of commercial mild steel, B., 143. Effect of phosphorus on the mechanical and corrosionresisting properties of low-carbon and low-alloy structural steels, B., 791.

Jones, James Hazlitt, and Cohn, B. N. E., healing of rickets in rats on a diet containing negligible amounts of calcium and vitamin-D, A., III, 257.

Jones, John H., and Miller, J. M., smallscale gas calorimeter, B., 747.

See also Berry, Harold.

Jones, J. I. See Owen, E. A. Jones, J. I. M. See Morton, J. Jones, J. K. N. See Haworth, W. N.

Jones, J. L., and Ogg, R. A., jun., equilibrium CMe₃I

CMe₂:CH₂ + HI, A., I, 619. Kinetics of the pyrolysis of n-propyl iodide and n-butyl iodide, A., I, 621. Kinetics of the thermal decom-

position of isopropyl iodide, A., I, 621. Jones, J. S., and Hatch, M. B., significance of inorganic spray-residue accumulations

in orchard soils, B., 1253.

Jones, K. K., and Sherberg, R. O., aro neutral fat and lecithin present in gall

bladder bile ? A., III, 168.

Jones, L. D., and Sharples Specialty Co., continuous chemical treatment of petroleum oil, (P.), B., 411. Dewaxing oil, (P.), B., 413. [Fractionation of oil by distillation], (P.), B., 1016. Dewaxing of petroleum stock, (P.), B., 1164. See also Sharples Specialty Co.

Jones, L. G. See Stewart, R. T.

Jones, L. I., feeding value of pastures sown with different strains of grasses and clovers, B., 615.

Jones, L. T. See Union Carbide & Carbon Corp., and Union Carbide & Carbon Res.

Jones, M. See Heller, V. G.

Jones, Maldwyn. See Imperial Chem. Industries.

Jones, M. S., and MacGregor, T. N., inhibitory effect of follicular hormone on anterior pituitary in humans, A., III, 40.

MacGregor, T. N., and Tod, H., cestradiol benzoate therapy in depressions at the menopause, A., III, 150.

Jones, O., changes in meat during curing, B., 281. Thermal behaviour of microorganisms, B., 725. Technical control in [meat] canning, B., 1264.

Jones, O. L., Illinois Clay Products Co., and Schundler & Co., F. E., plastic refractory insulating material, (P.), B., 673.

Jones, P. C., and Goodrich Co., B. F., diaryldithiocarbamates, (P.), B., 760. Aromatic dithiocarbamates, (P.), B., 879. Jones, P. G., and Richart, F. E., effect of testing-speed on strength and clastic properties of concrete, B., 555.

Jones, P. H., pepper: its processing and sophistication, with note on spices, B., 182. Ginger; its processing and sophistication, B., 493. Nutmegs, mace,

Jones, P. L. F. See Gregg, A. H.
Jones, Q. R. See Mather & Platt, Ltd.
Jones, R. A. See Ellis, B. A.

Jones, R. B. See Barnett, C. W. Jones, R. O. See Ellis, M. M.

Jones, R. S., card or paper stock for use in

duplicating processes [hectography], (P.), B., 129.

Jones, S. K., mastic asphalt compositions, (P.), B., 1210.

Jones, T., and Sherman, A., calculation of equilibrium constants and activation energies for some reactions involving various isotopic species of hydrogen,

water, and hydrogen sulphide, A., I, 462. Jones, T. D., Reinhardt, J. C., and Amer. Smelting & Refining Co., detinning of

lead alloys, (P.), B., 800.

Jones, T. O., and Hall, N. F., relative at. wt. of oxygen from air and water determined by an interchange reaction, A., I, 185.

Jones, W. E. See Batty, J. W. Jones, W. L., and Demco Library Supplies,

adhesives, (P.), B., 704.

Jones, W. W., respiration and metabolism in etiolated wheat seedlings as influenced by phosphorus nutrition, A., III, 106.

and Beaumont, J. H., carbohydrate accumulation in relation to vegetative propagation of the Litchi, A., III, 500.

Jongen, H. F. See Clay, J. Jonnard, R., magnetic susceptibility of normal and pathological serum, A., III, 299. Refractive index of cancerous sera, A., III, 342.

Jonsson, A. E., apparatus for preparation

of malt, (P.), B., 177.

Jonxis, J. H. P. See Brinkman, R.

Joos, \hat{G} ., nature of hydrate binding for ions of transition elements, particularly Co",

Joplin, G. A., Ben Bullen plutonic complex, N.S.W., A., I, 206. Lawsonite in Glaucophane-bearing rocks from New Caledonia, A., I, 433.

Jordan, C. N. See Lischer, C. F.

Jordan, C. W. See Ward, A. L.

Jordan, D. O. See Powney, J.

Jordan, E. B., and Bainbridge, K. T., massspectrographic measurement of the mass separation of certain doublets, A., I, 542.

See also Bainbridge, K. T.

Jordan, E. O., and Burrows, W., production of enterotoxic substance by bacteria, A., III, 147.

Jordan, H., developments in coke-oven design. I., B., 311. Progress in the coking industry. II., B., 404. Developments in firing [of cement kilns] with solid, liquid, and powdered fuels, B., 783. Progress in gas production in 1936, B., 1294.

Jordan, Heinz, biological differentiation of proteins of various parts of the wheat grain by means of the urinary quotient and its effect on active metabolism as compared with casein and ovalbumin, A., III, 128.

Jordan, Henry. See Du Pont de Nemours

& Co., E. I.
Jordan, H. E., standard methods and

water[-purity] standards, B., 1139. Jordan, H. F., Brass, P. D., and Roe, C. P., examination of rubber latex and rubber latex compounds. I. Physical testing methods, B., 702.

Jordan, H. V., Ergle, D. R., Hunter, J. H., and Adams, J. E., pigmentation in the root of the cotton plant, A., III, 365.

Jordan, L., production, heat-treatment, and properties of iron alloys, B., 44. See also Schoonover, I. C.

Jordan, L. A., preparation of metal surfaces

for painting, B., 930. and Whitby, L., preservation of iron and steel by means of paint, B., 143.

Jordan, O., oil-saving coating compositions [vehicles], B., 368.

Jordan, P., Neutrino theory of light. II. and III., A., I, 278. Nuclear forces, A., I, 341*.*

Jordan, S. B. See Du Pont de Nemours & Co., E. I.

Jorde, W., thermal polymerisation of styrene, A., I, 367.

See also Breitenbach, J. W., and Dostal, H.

Jores, A., function of pigment hormone in warm-blooded organisms. I. Effect of hormone on temperature and blood-sugar following interventricular injection in rabbits, A., III, 150. Variations in hormone content of the pituitary with alternation of light and darkness, A., III, 150.

and Beck, H., biological test for the corticotropic hormone, A., III, 149.

Joret, G., and Malterre, H., principal crop plants of the silt soils of Santerre, B., 598. Determination of the phosphoric acid requirement of chalky soils, B., 820. Jorgensen, L. R., grouting cracks and contraction joints, (P.), B., 1058.

Jorgensen, P. S. See Yakowitz, M. L. Joriot, R. See Régnier, J. Joris, G. See Taylor, H. S.

Jorissen, W. P., induced oxidation of naphthalene with ascorbic acid as inductor, A., II, 55. How does the human body obtain all the elements which it needs? A., III, 118.

Jornitsky, J. G. See Stender, V. V.

Jorpes, E., and Bergström, S., amino-sugar of heparin, A., II, 8. Heparin: a mucoitinpolysulphuric acid, A., III, 200.

Joscheck, R., electrical and mechanical properties of the carbon granules of microphones, B., 1073.

José, R. H. See Schmidt-Hebbel, H. Joseph, A., and Houdry Process Corp., catalytic apparatus and regeneration of contact masses therein, (P.), B., 1144.

Joseph, C., and Sylvania Industrial Corp., wrapping materials, (P.), B., 895.

Joseph, H. See Gen. Chem. Co. Joseph, L., sealed stirrer, A., I, 380.

See also Gardner, J. H.Joseph, N. R., heterogeneous equilibrium

of protein solutions. I. Activity coefficients and membrane equilibrium in mixtures of gelatin and salts, A., I, 80. Joseph, T.L. See Holbrook, W.F. Josephs, F. See Kaufmann, H.P.

Josephson, B., and Jungner, G., determination of bile acids in bile; proportion between the acids, A., III, 57. and Rydin, A., absorption of bile acids

from the intestines, A., III, 64.

Josephson, D. V. See Dahle, C. D. Josephson, E. M., and Freiberger, M., carotene therapy of retinitis pigmentosa, A., III, 90.

Josh, G. See Ralston, A. W. Joshi, C. B., Barve, P. M., and Desai, B. N., dialysis in study of colloids. IV. Colloidal arsenious sulphide, A., I, 131. See also Mankodi, G. F.

Joshi, K. C. See Sen, H. D.

Joshi, S. S., and Das, K. R., coagulation of colloids. XVII. Anomalous coagulative power of aqueous mercury chloride, A.,

and Kulkarni, S., "zonal effect" in slow coagulation of colloidal arsenious sul-

phide, A., I, 361. and Menon, T. M., coagulation of colloids. XVI. "Zonal effect" and anomalous variation of viscosity, transparency, and refractivity during coagulation of colloidal antimony sulphide by aqueous mercury chloride, A., I, 361.

and Rao, N. H., coagulation of colloids. XV. Gold sol coagulation, A., I, 238.

and Rao, P. V. J., coagulation of colloids. XVIII. Zonal effect and antinormal change of opacity during the slow coagulation of colloidal manganese dioxide, A., I, 564.

and Singh, G., thermo-ageing of colloids. II. Variation of the viscosity and

opacity, A., I, 515. and Solanki, D. N., influence of strong electrolytes and mercuric chloride on conductivity of aqueous benzoic acid, A., I, 566.

Josifov, S., separating acid from acid

sludge by electric heating, B., 11.

Josikova, V. M. See Devjatnin, V. A.

Josland, S. W., total ash of sheep's bones as an index of calcification, A., II, 198. Effect of feeding excess of cobalt to healthy sheep, A., III, 389. See also Askew, H.O., and Lugg, J.W.H.

Joslyn, M. A., Marsh, G. L., and Fessler, J., comparison of several physical methods for determination of the alcohol content of wine, B., 486.

Josserand, A. See Arloing, F., and Mouriquand, G.

Jost, W., and Nehlep, G., influence of pressure of ionic conductivity of solids, A., I, 64.

Joszt, R., colorimetric determination of chromotropic acid in technical H-acid, B., 647.

Jouan, R., comparison of the rates of diffusion of hydrogen and deuterium through heated platinum, A., I, 294.

Jouaust, R., constitution of the ionosphere, A., I, 278.

Jouis, E. See Brioux, C.

Jouravsky, G. See Capdecomme, L.

Jourdan, F., and Galy, P., rôle of adrenaline-secretory activity of acetylcholine in its action on blood-sugar, A., III, 64.

Galy, P., and Galloni, L., effect of intravenous, subcutaneous, and intramuscular injections of acetylcholine on blood-sugar, A., III, 3.

and Morin, G., liberation of a sympathicomimetic substance by section of the vagus nerves in the neck of the decapsulated dog, A., III, 266.

and Vial, J., effect of acetylcholine on the blood-sugar of the adrenalectomised dog, A., III, 195.

See also Hermann, H.

Jourdin. See Lacape.

Jourdin, P. See Fleury, G.

Journal Box Servicing Corporation. See Bissell, W. T.

Jouse, V. P., properties of the barrier layer in valve photocells, A., I, 346.

Jowett, M., manometric determination of volatile substances soluble in water with special reference to ether, A., II,

and Quastel, J. H., effects of hydroxymalonato on metabolism of brain, A., III, 131. Effects of narcotics on tissue oxidations, A., III, 217. Effects of ether on brain oxidations, A., III, 350.

Joy, H. van B., and Bogert, M. T., thiazines. III. Synthesis of eyanine dyes of the perinaphtho-m-thiazine series, A., II, 37.

Joyet-Lavergne, P., chondriome from the red cells of vertebrate blood, A., III, 1. Oxidative catalysis in the living cell, A., III, 63. Physico-chemical characters of sexuality in fungi, A., III, 271. Zones of oxidation in the living cell demonstrated by the cobalt salt method, A., III, 368.

Joyner, N. T. See Spielman, L. A.Józefowicz, E., solubility of arsenious oxide in aqueous magnesium, calcium, strontium, and barium chlorides and bromides, A., I, 421.

and Chowieńczyk, T., solubility of salts of fatty acids in mixed solvents. I. System barium acetate-ethyl alcoholwater, at 25°, A., I, 510.

Jucker, P. See Edlbacher, S. Judd, W. F., eleaning coke-oven and watergas, B., 405.

Jude, A. See Sacquépée, E.
Judina, V. I. See Kuzminich, I. N.
Judovits, N., and Verzár, F., absorption of various sugars after adrenalectomy, A., III, 436.

Judson, W. See Bacon, R. F.
Judy, P. R., and Indiana Steel & Wire Co., flux-coated [welding] electrode, (P.), B.,

Jübermann, O. See Fischer, W.

Jnel, I., accuracy of determinations of

growth-substance, A., III, 50.

Jürgen, R., linseed oil "refining fatty acids" and their use in linoleate driers, B., 260.

Juettner, B., mellitic acid from coals, cokes, and graphites, A., II, 102. Nature of carbonaceous materials as revealed by the yield of mellitic acid obtained on oxidation, B., 1151.

Smith, R. C., and Howard, H. C., oxidation of a Pittsburgh seam bituminous coal and low-temperature coke by alkaline permanganate, B., 403.

Juilfs, J., origin of additional ionisation in barrier layers of the higher atmosphere, A., I, 541.

and Masuch, V., ionisation in gases by γ -rays and ultraradiation, A., I, 162.

Jukes, E. H. T., potentiometric titration,

A., I, 147.
Jukes, T. H., assay, distribution, and properties of the filtrate factor, A., III, 103. Vitamins required by chicks, A., III, 493. Biological assay of lactoflavin with chicks, A., III, 495. See also Babcock, S. H., jun., Fouts,

P. J., and Lepkovsky, S.Julian, G. E. See Keutmann, E. H.

Julianelle, L. A., determination of staphylococcal types by fermentation of mannitol, A., III, 317.

Julien, A. P. See Keene, P. A.

Julien, A., variation in the cardiac

automatism as a function of the ratio Na + K : Mg + Ca in Aplysia fasciata,A., III, 93.

and Peillon, M., transport of potassium chloride across the myocardium of Hel**i**x pomatia, A., III, 474.

Jullien, P., and Kayser, F., preparation of diastereoisomeric pairs of alcohols, A., III, 241.

Jullig, (Mlle.) T., and Barbière, J., determination of nitrogen in di- and trinitronaphthalene, B.,1168.

Jumanova, L. V. See Schtschorbakov, I. G.Jung, $A_{\cdot \cdot}$, interpretation of vitamin experiments, A., III, 323. See also Schopfer, W. II.

Jung, F. W. See Fieldner, A. C.

Jung, G. See Koenigs, E.

Jung, H., vanadiferous muscovite from Schmiedefeld, Thuringia, A., I, 205. Montmorillonite from Dolmar, Meiningen, A., I, 206, 482.

Jung, I., heat transfer and frictional resistance to flow of gases in tubes at high velocities, B., 197.

Jung, K. P. See Löbering, J.

Jung, V. N., calculation of the raw materials for cement, B., 784. Theory of hardening of lime-puzzuolana cements, B., 784.

Jungbluth, H., changes in tensile strength and Brinell hardness of cast iron with wall thickness, B., 445.

Junge, $C.\ H.$ See Schwartz, $H.\ A.$ Jungeblut, $C.\ W.$, poliocidal property of pregnant mare serum, A., III, 74. Inactivation of poliomyelitis virus in vitro by ascorbic acid, A., III, 148.

Jungermann, K., determination of organic matter and plant-physiological value of nutrients in hummal-B and nettolin, B., 708.

Jungers, J. See De Hemptinne, M. Jungers, J. C., and Bonhoeffer, K. F., rate of exchange of hydroxyl hydrogen [for deuterium] in aqueous solution, A., I, 29.

and Wirtz, K., exchange of hydrogen between ethyl alcohol and calcium deuteroxide, A., I, 81.

See also Delfosse, J. M., Förster, T., and Taylor, H.S.

Jungersen, T. G., casting of metals [jewel-lery], P., B., 54.

Jungkunz, R. See Pritzker, J.

Jungmann, K., preparation for protecting

and sealing wounds, (P.), B., 729. Jungner, G. See Josephson, B. Junior, R. See Villela, G. G.

Junitschman, P. See Klein, G. Junitzkaja, N. V. See Tananaev, N. A.

Junkers Flugzeng- & Motorenwerke Akt.-Ges., apparatus for separating gas and vapour from flowing liquids, especially the liquids of cooling systems of internalcombustion engines, compressors, etc.,

(P.), B., 511. Junkins, J. N. Seo Curtis, H. A.

Juraschevski, N., colorimetric microdeter-mination of codeine, B., 1132.

Jurgenson, M. P., action of vegetable disaggregating and proteolytic enzymes on the proteins of wheat and rye, A., III, 141.

See also Blagovestschenski, A. V.

Jnrich, H., primary etching of grey cast iron, B., 917.Juriev, J. K., chemical composition of

Uchta heavy petroleum, B., 749. Modification of chemical composition of Surachani petroleum in migrating from deep to shallow deposits, B., 1004.

and Levina, R. J., action of aluminium chloride on diphenyl, A., II, 284.

Levina, R. J., and Kudrjavcev, A. I., action of aluminium chloride on dicyclohexyl, A., II, 91.

and Mironenko, G. I., catalytic dehydrogenation of trans-decahydroquinoline, A., II, 387.

and Musaev, I. A., chemical composition of Kala petroleum, B., 1004.

and Pavlov, P. J., catalytic isomerisation

of n-octane, A., II, 173. and Rakitin, P. M., catalytic transformation of heterocyclic compounds. VI. Comparison of action of catalysts in the simultaneous dehydration of furan and ammonia, A., II, 29, 259. See also Levina, R. J., and Titz, I. N.

Jurišić, P. J., colloid chemistry of narcosis, A., III, 93. Effect of narcotics on the state of living matter; infra-red effect in narcosis of striated muscle, A., III, 136. Reid's experiment, A., III, 176.

Jurist, A. E., and Christiansen, W. G., chemical nature of iodobismuthic acid and its relationship to alkali iodide compounds of bismuth iodide, A., I, 474. Effect of cystine on toxicity and trypanocidal activity of neoarsphen-

amino, A., III, 351.
See also Lott, W. A.
Jurkiewicz, L. See Malachowski, R.
Jurkin, E. N. See Korovin, G. M.

Jurkovskaja, F. B. See Rosenberg, M. A. Jurovski, A. Z., determination of sulphur in coal and coke, B., 681.

and Shadanovskaja, A. P., determination of precipitates by density measurements, A., I, 327.

See also Scheinman, R. D.

Jurriëns, H. J. See Kreveld, A. van. Jursheuko, A. I., electro-osmotic studies of diaphragms, A., I, 359.

Sco also Shukov, I. I.

Jusatz, H. J. See Pfannenstiel, IV. Juschin, V. V., determination of calorific

value of gaseous fuels from analysis of the products of combustion, B., 1002.

Juschkevitsch, N. F., and Torotscheschnikov, N. S., liquid and gaseous phases in the system nitrogen-carbon monoxide, A., I, 136.

Juschkevitsch, S., comparison of methods for determining iodine values of vegetable and animal fats, B., 364.

Juschmanov, E. V., separate determination of nitrogen oxides in the gases of Gay-Lussac towers, B., 338.

and Popilski, M., determination of dust in flowing gases, B., 508.

See also Kuzminich, I. N.

Just, E. E., protoplasmic specificity, A., III, 5.

Just, F., constitution of pectic substances, A., II, 483.

and Fink, H., observation on bung apparatus [for pressure determination] and its explanation, B., 1116. See also Fink, H.

Just, $J_{\cdot,\cdot}$, and Szniolis, $A_{\cdot,\cdot}$, bactericidal properties of silver: application to water disinfection, B., 193.

Justi, E., calculation of specific heat, enthalpy, and entropy of air, A., I, 354.

and Nitka, H., transformations of higher orders, A., I, 291. Visual determination of the transformations of condensed hydrogen sulphide, H2S and D₂S, A., I, 450.

Justice, R. S., phytochemical notes. I.

Monarda menthæfolia, A., III, 50.

See also Christensen, B. V.

Justin-Besancon, L. Sco Villaret, M. Justin-Mueller, E., accelerating action of metallic salts and organic compounds in the aniline-black condensation, A., II, 309. Diazo-reaction of albumin and its utilisation in urology, A., III, 88. Chlorination of wool, B., 423. Theory of chlorination of wool for printing, B., 897. Crêpon and imitation embossed effects [with calcium thiocyanate] on wool fabrics, B., 1196. Printing of woollen fabrics with thiocyanates, B., 1326.

Justoni, R., action of concentrated hydrochloric acid on arylazocarboxylamides [arylazoformamides], A., II, 187.

See also Fusco, R.
Justus, J. E., [oil] filter, (P.), B., 644.
Juttner, H., differentiation of refined beet sugar from other grades, B., 175.

Juza, R., metallic amides. I. Amides of [elements of] groups I and II, A., I,

Fasold, K., and Haeberle, C., metallic amides. II. Amides of the alkali metals, A., I, 627.

Fasold, K., and Kuhn, W., metallic amides. III. Zine and cadmium amides, A., I, 627.

and Langheim, R., colorimetry with colloidal solutions. I. II. Colorimetric determination of cadmium as sulphide, A., I, 266, 632. Surface compounds, A., I, 510.

Sce also Hahn, H.

Juzichin, A., approximate aërodynamic method of determination of mol. wt. of volatile liquids and their mixtures, A., I, 583.

Kaasa, O. G., Kimball, T. B., and Sinclair Refining Co., cracking [of hydrocarbon oils], (P.), B., 1015.

Kaatz, L., and Richter, H. E., [removal of carbon dioxide from water by] the Magno process, B., 397.

Kabai, H. See Tachi, I.

Kabakjian, D. H., dependence of luminescence on physical structure in zine borate compounds, A., I, 220.

Kabanov, B., hydrogen overvoltago at high current densities, A., I, 245.

and Fainglus, E., formation of pits in

olectrodeposited metal, B., 579.
and Ivanischtschenko, N., electrocapillary phenomena and the wetting capacity of metals, A., I, 358.

Kabat, E. A. See Heidelberger, M., and Lehrman, L.

Kabatschnik, M. I., and Rezon, V. V. preparation of p-phenanthrolino and 3:3'-dipyridyl, A., II, 118.

and Zitzer, A. I., rupture of cyclic azomethines; opening of the ring of 6:7dimethoxyisoquinoline, A., II, 210.

Kabatu, M., imperfection of aluminium crystals, B., 1222.

Kabel & Metallwerke Neumeyer Akt.-Ges., and Kröner, E., lead-tellurium alloys, (P.), B., 251.

Kabushiki Kaisha Hokushin Denki Seisakusho, electrical devices for detecting a gas in a gaseous mixture and for determining the amount thereof, (P.), B., 803.

Kabutschnik, M. See Katznelson, M. Kachelmann, K. See Dvorsák, H.

Kácl, K., and Fink, F., determination of creatinine in soup-substitute preparations, B., 1263.

Kaczorowski, A., preparation of anhydrous aluminium chloride from Polish clays, B., 541. [Apparatus for] testing the fastness of dyeings to water, washing, and perspiration, B., 1195.

See also Wasilewski, L.

Kaczyński, J. See Czochralski, J. Kada, R., utilisation of cracked gas for city gas carburation, B., 639.

Kaden, E., Oehme, C., and Weber, K., behaviour of the adrenals in experimental hyperthyroidism, A., III, 277.

Kadmer, E. H., new uses for colloidal graphite as lubricant, B., 12. Natural and artificial ageing of automobile motor oils, B., 316. [Oil-]refining with selective solvents, B., 1297.

Kadow, K. J., and Anderson, H. W., zinc sulphate in peach sprays: limited tests in apple sprays, B., 171. Relation of zine sulphate to injury from peach and apple sprays in 1935, B., 1106.

Ruth, W. A., and Anderson, H. W. greenhouse wires and pipes galvanised with zinc react with sulphur dioxide to form soluble zinc salts, B., 1107.

See also Anderson, H. W. Kaelin, M. See Fleisch, A.

Kaemmerling, G. H., and Erie City Iron Works, apparatus for pulverising material, (P.), B., 631.

Kaempie, F., testing corundum and carborundum, B., 1052.

See also Kratzert, J.

Kämpfer, A., laminated glass, (P.), B., 262, 441. [Intermediate layers for] laminated glass, etc., (P.), B., 262. Laminated glass and similar products, (P.), B., 441. Non-splintering laminated glass, (P.), B., 672. Presses for manufacture of multi-layer non-splintering glass, (P.), B., 783.

Kämpfer, A. H., [multiple filter for] copying additive-colour kinematograph films, (P.), B., 1278.

Käpernick, E., preparation of specimens of aluminium and its alloys for microscopical examination, B., 51. Sec also Röhrig, H.

Kärnbach, K. See Enders, C., and Lüers, H. Kaertkemeyer, L. See Mund, W.

Kästner, H., aluminium free-cutting alloys on an aluminium-copper-magnesium and an aluminium-magnesium-silicon basis, B., 687.

Kafuku, K., and Hata, C., seed oils of Formosan plants. XII. Sapotaceæ oil, B., 463.

and Ichikawa, N., odorous principles of lignum aloe, A., III, 190.

Ikeda, T., and Hata, C., essential oil of I antana camara, L. II. and III., A., II, 201.

and Kato, R., volatile oil of Piperaceæ, B., 497.

Kafuku, K., and Ogura, T., reaction between methane and water vapour, B., 746.

and Syônô, S., solveut extraction of Formosan petroleum oils. I. General properties of Tôsikyakú and Syukkôkô crude petroleum and results of sulphuric acid treatment of gasoline and kerosene fractions therefrom, B., 1296.

Kagan, G. B., distillation of coal tar in a stream of coal gas or air, B., 748.

and Proschtschin, I. V., absorption of ammonia by lignite, B., 902.

and Schtscherbina, V. M., gasification of Ukrainian lignites under pressure, B.,

See also Belov, K. A.

Kagan, I. B. See Gurevitsch, V. G. Kagan, I. L., optimum régime of preparation of viscose cellulose, B., 331.

Kagan, M. See Kraszewski, W

Kagan, M. J., preparation of ethyl acetate from acetaldehyde by Tischtschenko's

reaction, B., 756.
Morozov, N. M., and Podurovskeja, O. M., sorption properties of mixed catalysts. I. Sorption of ammonia on ammonia catalyst and rôle of the promoter, A., I, 76.

Kagan-Chabchay, A., radioactivation of skin creams, powders, etc., (P.), B., 1140.

Kaganova, T. See Orlov, I.

Kaganovskaja, S. N., respiratory meta-bolism of nerves with blocked con-ductivity, A., III, 126.

and Kahn, J. L., changes in gaseous metabolism with age in the sciatic nerve of the rat, A., III, 208.

Kagarise, I. H. Sec Currier, A. J.

Kagawa, I., thermodynamics of cellulose nitration. I. Chemical equilibrium of nitration. II. Law of mass action, B., 766.

Kagi, W. W. See Western Electric Co. Kagy, T. K., toxicity of some nitrophenols as stomach poisons for several species of

insects, B., 711. Kah, E. See Freyberg, W. Kahali, B. S. See Chandhuri, H.

Kahan, T., theory of the deuteron; protonneutron interaction with an exponential course, A., I, 163.

Kahane, E., methylcholines; oxidation with permanganate, A., II, 233. Choline in biochemistry, A., III, 252. Chlorine in biological substances, A., III, 295.

and Antoine, G., nature of silica in living organisms, A., III, 118.

and Levy, J., effect of anti-esterases on pharmacodynamic action of acetylcholine, A., III, 265. Biochemistry of choline and its derivatives. Presence of acetylcholine in a latent state in blood. VI. Presence of choline in biological substances; cholino of sperms. VII. Action of leech and frog muscle on quaternary ammonium compounds with an ester grouping, A., III, 336, 382. Mechanism of sensitisation to acetylcholine, A., III, 349.

Kahbab, S. See Koperina, A. Kahl, G., and Biesalski, E., catalysis with fine foam and colloidal metals. III. Comparison of catalytic action of palladium, platinum, and rhodium, A., I, 89.

Kahlenberg, O. J., Black, A., and Forbes, E. B., utilisation of energy-producing nutriment and protein as affected by sodium deficiency, A., III, 261.

Kahler, H., and La Croix, V., influence of ascorbic acid on melanogen elimination, A., III, 154.

Kahler, H. L. See Sheen, R. T. Kahn, B., interaction of nuclear particles,

A., I, 341.

Kahn, J. L. See Kaganovskaja, S. N Kahovee, L., and Kohlrausch, K. W. F. Raman effect. LXII. Heterocyclic six-membered rings. LXVIII., A., I, 220, 345.

and Mardaschev, S., Raman effect.

LXIX, A., I, 345. and Reitz, A. W., Raman effect. LXI. Raman spectra of organic substances; benzene derivatives, A., I, 113.

Kahr, K. See Fischer, Hans.

Kailan, A., and Ebeneder, F., effect of heavy water on rate of hydrolysis of esters and on the equilibrium constant, A., I, 622.

and Hartel, F., velocity of catalytic hydrogenations. IV., A., I, 470.

and Melzer, W., influence of neutral salts on velocity of esterification and viscosities in ethyl-alcoholic hydrochloric acid, A., I, 142.

Kailich, A. See Schüller, H. Kainarski, I. S., silica brick bonded with chalk, B., 913.

Pines, B.J., and Kozlov, S.J., suspended, unfired, reinforced roofs for openhearth and electric furnaces, B., 782.

Kaischev, R., possibility of formation of small crystals in melts at temperatures above the m. p., A., I, 553. See also Stranski, I. N.

Kaiser, H., quantitative spectral analysis, A., I, 323.

Kaiser, H. F. See Canfield, R. H. Kaiser, L. See Lichtenberger, T. See Canfield, R. H.

Kaiser-Wilhelm-Instut für Eisenforschung, treatment of raw phosphates, (P.), B., 437.

Kajimoto, S. See Kobayashi, R.

Kakefuda, H., preparation and chemical investigation of vitamin- B_1 , A., III, 231.

Kakemi, K. See Sugasawa, S. Kakihara, G. See Naka, S. Kaku, T., Kutani, N., and Takahashi, J.,

I-asarinin, a new constituent of varieties of Asarum. I. Constitution of l-asarinin, A., II, 259.

Kalaja, T. See Simola, P. E.

Kalandyk, S., emission of negative electricity by glowing platinum in chlorine, A., I, 56.

Kalapesi, A. S., and Contractor, G. P., petrology of the Salsette Island, Bombay, A., I, 206.

Kalaschnikov, S. G., determination of inner potential of crystals from electron diffraction, A., I, 119.

and Jakovlev, I. A., diffraction of slow electrons by zino single crystals, A., I, 119,

Kalckar, F., Oppenheimer, J. R., and Serber, R., nuclear photo-effect at high energies, A., I, 543. Resonances in transmutations of light nuclei, A., I, 544.

Kalckar, H., phosphorylation in kidney tissue, A., III, 261.
Kalebin, M. I. See Saburov, N. V.
Kalctscheva, A. V. Sce Lebedev, S. V. Kalfe, A. I., hydrogenation of oxidised and polymerised sunflower oil, B.,

463.

Kali-Chemie Akt.-Ges., intensifying screens for radiographical purposes, (P.), B., Incoagulable blood or plasma, (P.), B., 729. Calcined phosphates, (P.), B., 1201. Manufacture of X-ray photographs of the human kidneys, (P.), B., 1274. X-ray film assembly, (P.), B., 1276.

Kali-Forchungs-Anstalt Ges.m.b.H., re-covery of potassium and ammonium phosphates or mixed fertilisers containing same, (P.), B., 35.
Kalia, P. N., technique for making

Schumann plates, A., I, 201. Spectrum of singly ionised zinc, A., I, 157.

Kalichevsky, V. A., Simpson, T. P., and Story, B. W., solvent refining of lubricating oils, B., 1007.

See also Standard Oil Development Co.

Kalinen, V. I., determination of dielectric constants at very high frequencies, A.,

Kalinowski, K_{\cdot} , determination of barbituric acid derivatives, A., II, 130.

Kalisch, E., welded structures in locomotive construction, B., 351.

Kalish, J., shaving creams, B., 805.

Kallander, E. L., Alden, G. R., and Dennison Manuig. Co., sticking of bodies

[with vinyl resin compositions], (P.), B., 69. Adhesive tape, (P.), B., 69.

Kallauner, O., special cement, B., 785.

Corrosion of cement mortar and

concrete by liquids, B., 1208. [with Stopka, V., Knraš, Šiman, J., Alejnikow, I., and Krause], work of the [Czechoslovakian] National Research Institute for the Silicate Industry, B., 549.

Kalle, K., fluorescence of aqueous diacotyl solutions, A., I, 113.

Kalle & Co., Akt.-Ges., [enzyme] de-sizing [of goods sized with starch], (P.), B., 31. Artificial sausage casings, more particularly round sausage casings, (P.), B., 228. Washing means, (P.), B., 808. Light-sensitive diazotype layers, (P.), B., 983, 1276. Diazotype photographic

printing paper, (P.), B., 984.
Kalling, B., and Rudberg, N., acid openhearth process [of steel manufacture],

B., 1058.

and Stalhed, J., deposition of carbon during reduction of iron ores, B., 1058. Kallmann, H., and Kuhn, E., D-D nuclear

reaction, A., I, 276.
Kallock, W. F. See Eastman Kodak Co.
Kalmikova, N. V. See Fogelson, E. I.

Kalnin, P., cnolic form of acid anhydrides in the Perkin synthesis, A., II, 62. [Constitution of Knoevenagel's "acetoneanil"], A., II, 75. Mercuration of "acetone anil," A., II, 357.

Kaloyéréas, S., colour tests to distinguish ewe and cow milk, B., 970. Preservation of fruits and legumes during transport,

B., 974. Kalpers, H., construction and operation of modern tar-distillation plants, B., 516. Cleaning blast-furnace gas, B., 1001. Special steels and materials in tar-

distillation plant, B., 1215. Kalt, P. Sec Zetzsche, F. Kaltenbach, M., concentration of sulphuric

and nitric acids, B., 664. Kamal, S. See Dntta, M. C.

Kamazuka, A., and Rokusho, B., saccharification of wood and alcoholic fermentation of sugar, B., 828.

Kambara, S. See Tanaka, Y.

Kamecki, J., influence of certain gases on the potential of copper in solutions of copper sulphate and sulphuric acid, A., I, 519.

Kameda, II., lipins of acid-fast soil bacilli, A., III, 356.

Kamei, S., drying of solid materials. XVI.—XVIII., B., 1284.

and Shiomi, S., drying of solid materials. XIX.—XXIII., B., 1284, 1285.

Kamen, M. See Harkins, W. D., and McMillan, E. Kamerer, J. W., Whitmire, Le R. S., and

Duplate Corp., safety glass, (P.), B., 140.

Kameyama, N., and Iida, H., dry cells for use at low temperatures. II., B., 360. and Kikuehi, Shin-ichi, property of the surface of silver, A., I, 235.

and Naka, A., dry cells for use at low temperatures. III., B., 360.

Kamidoi, M. See Murata, Kazuya. Kamieński, B., and Benis, L., potentials at phase boundaries in process of flot-

ation, A., I, 310. and Inglot, J., dielectric potential of a potassium chloride solution at different $p_{\rm H}$, A., 1, 180. Dielectric potential and surface tension of cholic acids at different $p_{\rm H}$, A., I, 180.

Kamihara, S. See Shimoda, I. Kaminer, G. See Freund, E.

Kaminski, N., apparatus for determination of traces of hydrogen sulphide in gases, A., I, 536. See also Klein, G.

Kaminsky, J. See Beattie, J. A. Kamischan, N. See Pakschver, A.

Kamiya, S., oxalic acid metabolism in some diseases, A., III, 203. Hypoglycamic action of pyruvic acid, A., III, 215.

Kamlet, J. See Rosenthal, L. Kamm, K., zinc sulphide-cadmium sulphide phosphors, A., I, 550.

Kamm, O. See Marker, R. E., and Pratt,

Kamotzki, N., rubber for weather-observing balloons, B., 373. Use of synthetic rubber in moulded surgical goods, B., 1378.

Kamp, E. See Braun, J. von.

Kamp, L., cerium as raw material for

enamelling, B., 547.

Kampelmann, F., action of arsenious acid on the thyroid and anterior lobes of

the pituitary, A., III, 279. and Schulze, E., carbon monoxide and the anterior lobes of the pituitary, A., III, 278.

Kampf, L. See Bayor, E. H.

Kampfer, A., apparatus [press] for production of foils and plates particularly from highly elastic polymerisation products, (P.), B., 1194.

Kampitseh, A. See Fuchs, L.

Kamptner, H. [with Sauer, L.], recovery of bituminous material from solutions and mixtures, B., 1296.

Kamsolova, Z. See Zaprometov, B. Kamura, H., effect of phosphorus magnetic properties of iron, B., 43.

Kamuscher, G. D. See Moldavski, B. L. Kamzolkin, V. P., and Livschitz, V. D., inactivation of iron catalysts for ammonia synthesis by steam, B., 664. Influence of conditions of reduction on activity and structure of iron catalysts for ammonia synthesis, B., 902. Kan, C. H. See Wang, T. H.

Kan, C. K., decolorisation of the fang fish-liver oil by Fukien pottery clays, B., 258.

Kan, H. See Noda, T.

Kanagy, J. R., behaviour of [chrome- and vegetable-tanned] leather in the oxygen bomb, B., 1095.

Kanamaru, K., hydrophilic properties of celluloso. I. Hydration problem, A.,

and Fukuhara, Y., hydrophilic properties of cellulose. V. Damp-proof cellophane. II. Regeneration of cellulose from viscose in an electrically neutral

state, A., I, 183.

and Kohno, T., electrokinetic study of lyophilic properties of cellulose derivatives. II. Electrokinetic phenomena at interface between sols of cellulose derivatives and the dispersion medium. III. Electrokinetic phenomena at interface between sols of cellulose derivatives and solvent mixtures. A., I, 360. Lyophilic properties of cellulose and its derivatives. X. Electrokinetic phenomena at the surface between sols of cellulose derivatives of varying concentration and their dispersion media. XI. and XII. Solvent mixtures of varying

and Nakamura, T., hydrophilic properties of cellulose. II. Hydrophilic properties of electropositive cellulose fibres. III. Hydrophilic properties of electrically neutral cellulose. IV. Damp-proof cellophane. I. Sorption isotherms for mercerised cellulose treated with solutions of salts with multivalent cations, A., I, 80, 133, 183. Lyophilic properties of cellulose and its derivatives. IV. Hydrophilic properties of electropositive cellulose fibres. V. Hydrophilic properties of electroneutral cellulose, B., 124.

and Ueno, Shigeo, electrokinetic study of lyophilic properties of cellulose derivatives. I. Swelling and ζ-potential of cellulose nitrate in organic liquids, A., I, 305. Lyophilic properties of cellulose and its derivatives. VIII. and IX. Swelling and ζ-potential of cellulose nitrate in organic liquids, B., 766.

Kanan, M. A., action of morphine sulphate on intestinal motility and its modification by atropine sulphate, A., III,

See also Holck, H. G. O.

Kanaoka, Y. See Wieland, H.

Kanauchi, S., external temperature and the testes, with respect to fat metabolism. A., III, 39. External temperature and the ovary, with respect to fat metabolism, A., III, 39.

Kanazawa, H. See Nakamura, Seiji.

Kanda, E. See Aoyama, Shinichi. Kandel, J., hydrocarbons, halogen derivatives, ethers, and esters derived from tetrahydroionol, A., II, 415. See also Paliray, L.

Kandelaki, B., and Setaschvili, I., cobalt ethoxide and its hydrolysis, A., II, 174.

Kandiah, S. See Joachim, A.W.R.Kandler, L. See Scheibe, G.

Kane, E. A. See Shinn, L. A. Kane, F. A., preparation of charges for internal-combustion engines or burners, (P.), B., 756, 1016.

Kane, G. P., Chamberlain, E. A. C., and Townend, D. T. A., spontaneous ignition under pressure of simpler aliphatic hydrocarbons, alcohols, and aldehydes, A., I, 247.

and Townend, D. T. A., influence of pressure on spontaneous ignition of inflammable gas-air mixtures; the simpler olefines, A., I, 466.

Kane, \hat{H} . L., and Lowy, A., reactions of alkyl sulphates, ethyl orthosilicate, and ethyl carbonate in Friedel-Crafts syn-

theses, A., II, 45.

Kane, J. P., rubber-coated cake of soap, (P.), B., 587.

Kaneda, Y., organ and tissue metabolism; carbohydrate metabolism in the hind legs of dogs and the effect on it of insulin, A., III, 322.

Kaneko, Hideo, silk fibroin. IV. Relation between fibroin components, B., 532. Structure of silk fibre, B., 654.

and Komatsu, C., silk fibroin. III. Dyeing properties of fibroin components, B., 231.

Komatsu, C., and Nakazawa, Yoshio, silk fibroin. V. Relative viscosity of

fibroin component solutions, B., 532.

and Nakazawa, Yoshio, silk fibroin. Relative viscosity of fibroin and its component solution, A., III, 340.

Kaneko, Hikosaburo, influence of bone marrow on contents of inorganic salts in blood and urine in splencetomised rabbits, A., III, 131. Effect of drugs which act on the autonomic nervous system on inorganic salt contents of the urine and blood of rabbits, A., III, 137. Relation between spleen and various endocrine organs as indicated by inorganic salt metabolism. I. and II., A., III, 148.

Kanel, A. See Fabrikant, V.

Kaneta, B., effect of general anæsthesia on pH and alkali reserve of the blood, A., III, 136.

Kanetzkaja, $E.\ T.$ See Pigulevski, $G.\ V.$ Kanga, $D.\ D.$ See Saiyed, $I.\ Z.$

Kangro, W., and Wagner, K. M., streamline scattering in electrolytes, A., I, 189. Kaniaev, N. P. See Schilov, E. A.

Kanitz, H. R., effect of insulin on alimentary hyperglycamia and on alcohol content of blood after consumption of alcohol, A., III, 41.

and Bless, H., physiological action of 6-tetralon and its hydrogenated derivatives, A., III, 216.

Kankelwitz, B., photographic silver halide developing emulsions durably free from grey and yellow fogging and of durable quality, (P.), B., 1275.

Kann, S. See Fleischmann, W.

Kanne, W. R., disintegration of aluminium

by polonium a particles, A., I, 543. Preparation of polonium sources, A., I, 577.

and Bearden, J. A., columnar ionisation, A., I, 57.

Kannel, C. See Grasselli Chem. Co. Kanner, M. See Baas-Becking, L. G. M. Kansas City Testing Laboratory, decoration of

metal articles by electrolysis, (P.), B., 148. Kantam, (Miss) P. L. See Dey, B. B. Kanter, A. E. See Barnes, B. O. Kanter, D., and Ostroshinskaja, G., selectrolysis, and Control of the C

tion of dyes for viscose silk, B., 1325. Kantor, M. I., Dundur, E. I., and Bass, R. M., elimination of undesirable physical properties of ammonium nitrate connected with its hygroscopicity, B., 131.

Kantorer, J. See Glassmann, P.

Kantorovitsch, L. M. Seo Jatsuta, N. A. Kantrowitz, M. S., and Simmons, R. H. evaluating the printing qualifications of paper, B., 894.

Kao, Cheng Heng, Mou, H. C., and Sah, P. P. T., starch as a starting material for the preparation of succinic acid and bromoform, A., II, 370. See also Kao, Chung Hsi, and Sah,

P. P. T.

Kao, Chung Hsi, and Chang, W. S., syntheses from castor oil. II., A., II, 366. and Chen, K. H., preparation of malonic ester, A., II, 367.

Kao, Cheng Heng, Tu, C. W., and Sah, P. P. T., o-bromobenzhydrazide as reagent for identification of aldehydes and ketones, A., II, 129.

Kao, C. K., and Yü, C. H., cottonseeds. II. Utilisation of lint and hulls, B., 225.

Kao, P. See Chang, Ta Y. Kao, S. Y. See Pin, K. L.

Kao Sekken Kabushiki Kaisha Nagase Shokai. See Igarashi, M.

Kaolin Processes, Inc. See McCormick,

Kapeller-Adler, R., and Boxer, G., effect of gonadotropic hormone on the degradation of histidine in the liver, A., III,

Kaping, F. W., effect of proteins of wheat endosperm on active metabolism, A., III, 128.

Kapitańczyk, K. See Krause, A.

Kapitza, P., and Milner, C. J., liquid nitrogen in magnetic experiments, A., I, 42ä.

and Morton, C., potentiometer for measuring very small resistances, A., I, 379.

Kaplan, A., and Chaikoff, I. L., effect of autoclaved pancreas on lipins of blood and liver in depancreatised dogs maintained with insulin, A., III, 24. Relation of glycogen, fat, and protein to water storage in liver, A., III, 61. Effect of raw and autoclaved pancreas on liver-lipins of the completely depancreatised dog maintained with insulin, A., III, 345. Effect of choline on the lipin metabolism of blood and liver in the completely departreatised dog maintained with insulin, A., III, 468.

See also Chaikoff, I. L.

Kaplan, E., and Korff, F. A., antimony in food poisoning, B., 615.

Kaplan, J., active nitrogen, A., I, 103. Vegard-Kaplan bands, A., I, 157. Measurement of pressures in the upper atmosphere, A., I, 479.

Kaplan, P., and Richards Chem. Works, sulphonation of [fatty] oil[s], (P.), B.,

Kaplan, S. I., Grischin, N. A., and Skvortzova, A. A., equilibria in solutions. II. B.p. under atmospheric pressure and vapour composition of binary mixtures of dichloroethane with ethylene chlorohydrin or ethylene oxide, A., I, 296.

and Reformatskaja, A. S., equilibria in solutions. III. Solubility and vapour pressure of solutions of ethylene oxide in water or dichloroethane, A., I, 296. Kaplan, S. S. See Mindlin, S. S.

Kaplan, W., and Forney, W. E., new Foward process makes 75% of sub-stituted benzenes, B., 108. See also Doherty Res. Co.

Kapoor, G. P. See Singh, B. N.

Kapp, H., and Schetty, A., mineral content of blood and benes in experimental scurvy in guinea-pigs, A., III, 207.

Kapp, L. C., relation of growth to nutrition

of rice plant, B., 167.

Kappeller, W. See Bömer, A.

Kappelmeier, C. P. A., automatic apparatus for laboratory steam distillations and for the determination of water, A., I, 268. Analysis of phthalate resins, B., 61. Steam distillation as aid in lacquer and paint analysis, B., 63. Oil varnish analysis, B., 811.

Kapsenberg, G., apparatus for automatic washing, filtration, and extraction, A.,

Kapur, A. N. See Bhatnagar, S. S. Kapur, P. L. See Bhatnagar, S. S., and

Yajnik, N. A. Kapuściński, W., monochromatically ex-

cited fluorescence of cadmium vapour, A., I, 385.

Kapustin, N. P. See Burkser, E. S. Kapustinski, A. F., geochemistry and the theory of metallurgy, A., I, 430.

and Hoffmann, E., equilibrium Co+CO₂ =CoO+CO. III., A., I, 516.

and Silberman, A., equilibrium of reaction of nickel with carbon dioxide, A., I, 137.

Kar, B. C., oxidation of phenols by means of hydrogen peroxide in presence of inorganic catalysts, A., II, 413. Oxidative deamination of amino-acids, A., II, 448.

See also Ghosh, J. C.

Kar, K. C., and Mukherjee, K. K., loss of energy by a-particles in hydrogen, A., I, 160.

Kar, S. C., fine structure formula of Sommerfeld and the electron spin, A., I, 546.

Karabasch, A. G., decomposition of tin ores containing cassiterite, B., 1064.

Karagunis, G., and Drikos, G., synthesis of optically-active molecules with the aid of circularly polarised light, A., II, 332. Karanovitsch, G. G., determination of small amounts of arsenic, A., I, 530.

Karantassis, T., and Vassiliades, C., preparation of stannic alkyl iodides and their action on aromatic amines, A., II, 450.

Karaoglanov, Z., mechanism of precipitation processes. XVIII. Interaction between potassium ferrocyanide and alkaline-carth salts, A., I, 40. Co-precipitation of various ions in precipitation of sulphate as barium sulphate, A., I, 97. Systematic detection and separation of anions, A., I, 147. Karasawa, Y., treatment of coal tar as

carried out by the Tokyo Gas Company, B., 1296.

Karasek, F., and Ponpa, O., seasonal variations in the sensitivity of the muscular arteries of Rana temporaria to adrenaline, A., III, 490. Augmentation of the vascular effect of adrenaline by testosterone, A., III, 492. Modification of the vascular effect of adrenaline by sex hormones of the opposite sex, A., III,

Karasev, K. I., reaction of magnesium tert.butyl chloride with ethyl acetate and propionate, A., II, 175.

Karasik, P. I., and Dobatkin, V. I., analysis of [steel-]cooling emulsions, B., 564. Selection of east iron for testing corrosive properties of cooling emulsions, B., 679. Karasik, V., and Lichatsohev, M., biological activity of aromatic and heterocyclic arsonium bases, A., III, 95. Influence of the anion of dimethylphenazarsonium salts on biological activity, A., III, 95.

Karasima, T. See Yamasaki, I.

Karavaev, N. M., Rapoport, I. B., and Choller, V. A., weathering of coal. II., B., 859.

Karczag, L., and Hanak, M., selective absorption in the ultra-violet of solutions of enzymes of the digestive tract, A., III, 430.

Karczewski, K., potential differences at the boundaries of two liquid phases. IV.—VII., A., I, 139, 187, 235, 310.

Kardakova, Z. I. See Gerke, F. K.

Kardaszewicz, J., and Panstwowe Wytwórnie Prochn, polysubstituted derivatives of urea, (P.), B., 650.

Kardo-Syssoleva, F. K. See Gudlet, M.

Kardo-Syssojeva, E. K. See Gudlet, M. Kardo-Syssojeva, H., acid production and acid-resistance of Aspergillus niger, A., III, 272.

Kardos, R. F. See Berko, J., and Erdey-Grúz, T.

Karelitz, G. B., and Kenyon, J. N., oil-film thickness at transition from semi-fluid to viscous lubrication, B., 753.

Karelskaja, T. See Dratschev, S. Karetnikov, G., graph for determination of acetic acid in acetic anhydride, B., 1016.

Karetnikov, G.A. See Krestovnikov, A.N. Karetnikova, A.F. See Turnas, P.A.Karges, R. A., aluminium reduction experiments, A., I, 203.

Kargin, V. A., and Katz, S. A., reaction of concentrated solutions of sodium silicates with calcium chloride, A., I, 257. Products of reaction of sodium silicates with electrolytes. II., A., I, 257.

Katz, S. A., and Komovski, A. F., products of reaction of sodium silicates with electrolytes. I., A., I, 257. and Michailov, N. V., influence of

electrolytes on non-aqueous cellulose nitrate solutions. I. Actions of nitric acid and NH₃, A., I, 613.

and Stepanova, A. A., coagulation of acetylcellulose sols, A., I, 304.

See also Berestneva, Z.J., Fodiman, E. V., Michailov, N. V., Neuman, R. S., Papkov, S. P., and Tschernitzkaja, R. Kari, I., dry matter and lipin content of

eggs, B., 181. Kariakina, N. V. See Gurevitsch, M. A. Karimullah, substituted phenyl- and benzylthiazolium salts, A., II, 354. See also Todd, A.R.

Karischin, A. See Daschevski, M. Kariyone, T., and Majima, A., essential oil

of Torilis anthriscus, Gmel, B., 497.
Karjakin, J. V., and Vinogradov, V. N., use of calculations and nomographic methods for indirect analysis of mixtures. I. Mixtures of iron oxides with metallic iron, A., I, 51. Rational analysis of mixtures of iron with its oxides, B., 678. Karjakin, L. I. See Gurvitsch, T. A.

Karkov, A. See Boggild, J. Karlik, B. See Haberlandt, H., and

Hernegger, F. Karlina, M. I. See Remezov, I. Karlson, L. E., determination of small

amounts of zinc, A., I, 476. Karlson, M. E. See Savron, E. S. Karmazin, V. I., determination of water

content of gases, B., 1002.

Karnad, R. See Venkatasubban, A.

Karpatschov, S., and Poltoratskaja, O., iodine overpotential in molten electrolytes, A., I, 311.

and Rempel, S., concentration polarisation in fused salts, A., 1, 141.

Rempel, S., and Sesjunin, A., rapid determination of moisture in unbaked brick, B., 345. Karpen, M. V., adhesion of concrete to

iron in reinforced concrete, B., 675.

Karper, J. G. See Clay, J.

Karpov, A. N. See Mischin, V. P.

Karpov, P. K. See Golovkov, M. P.

Karpova, M. P. See Kuznetzov, V. D.

Karpuschin, P. P., materials of the type of "Prodorite" and "Haveg," B.,

and Ratnikova, K. I., utilisation of naphthalic acid in the dyestuff industry, B., 881.

Karraker, P. E., effect of management practices on amount of nitrogen in soil, B., 710.

Karrer, P., and Büchi, J., reduction products of disaccharides; maltitol, lactitol, cellobiitol, A., II, 83.

and Escher, E., acetylation and methylation of cellulose; constitution of carbohydrates, A., II, 53.

Frei, P., and Fritzsche, H., a constituent of liver preparations highly active against pernicious anæmia, A., III,

Frei, P., and Meerwein, H., constitution of the lactoflavinphosphoric acid from liver, A., III, 119.

and Gugelmann, W., physalienone, A., II, 229.

and Herkenrath, E., reduction products from sugars and aliphatic amines, A., II, 89. Mechanism of the reduction of aromatic N-glucosides to arylglucamines, A., II, 446.

and Mayer, J., new degradation of glucosamic acid; configuration of glucosamic and chondrosamic acid, A., II, 234.

and Meerwein, H., flavin synthesis; crystalline intermediate products, A., II, 58.

and Meyer, J., glucosaminol, a reduction product of glucosamine, A., II, 370. and Ringier, B. H., reducing action of N-glucosido-o-dihydronicotinic amide

and analogous compounds, A., II, 387. Ringier, B. H., Büchi, J., Fritzsche, H., and Solmssen, U., model experiments on groups of the co-enzymes concerned with hydrogen transference, A., II, 114.

and Salomon, E., derivatives of phenylglucosamine, A., II, 89.

Schlenk, F., and Euler, H. von, action of hypoiodite on pyridinium bases, A., II, 348.

Schwarzenbach, G., and Utzinger, G. E., dihydropyridine compounds. IV. 1-Phenyl- and 1-p-anisyl-o-dihydropyridine, A., II, 113.

and Solmssen, U., β -carotenal, a degradation product of β -carotene, A., II, 378. Solmssen, U., and Gugelmann, W., β apo-4-carotenal, a further degradation product of β -carotene, A., II, 502.

and Solomon, H., constituents of plant seedlings. I. New compounds from the unsaponifiable matter of wheat-

germ oil, A., II, 242. and Stare, F. J., 1-alkyl-1:6-dihydronicotinamides, A., II, 260.

Karrer, W., determination of vitamin-B1 in male urine, A., III, 495.

and Kubli, U., determination of vitamin- B_1 (aneurin), A., III, 281.

Karsehnlin, M., periodic solution of iron in nitric acid, A., I, 250.

Karshan, M., factors in human saliva correlated with the presence and activity of dental caries, A., III, 300.

See also Rosebury, T.

Karshavin, V. A., Leibusch, A. G., and
Klevke, E. A., determination of low concentrations of methane in gases, B.,

Karskaja, T. N., thiocyanate reaction for

iron, A., I, 533. Karskoi, T. N., thiocyanate test for iron, A., I, 264.

Karsten, A., recent developments in photomicrography and their significance in paint and varnish laboratories, B., 90. Automatic methods for measuring the $p_{\rm H}$ of milk and meat products, B., 489. New microscope with photographic chamber for examining dairy products, B., 611. Modern microscopical technique in dairying, B., 1124.

Karsten, P., use of Philips sodium lamps in polarimetry, A., I, 265. Iodide determination (Richard's method) in iodine tineture and in sodium and potassium iodides, B., 186.

Karstens, W. K. H. See Baas-Becking, L. G. M.

Kartschagin, V., and Tolmatschev, V., X-ray spectrum analysis of copperzinc alloys, A., I, 23.

Karttunen, T., corrosive effect of groundwater on concrete, B., 443.

Kartzev, V. N., and Verbo, P. P., resistance of thickol and its mixtures to benzene and oil, B., 372.

Karunakar, P. D., and Rajagopal, T., pure culture studies of the sulphur organism Thiobacillus (sp. novo.), A., III, 145.

Karwat, E., production of pig iron or steel simultaneously with Portland cement, (P.), B., 689.

Karweil, J. See Bartholomé, E.

Kasahara, M., and Gammo, H., vitamin-C content of [cerebrospinal] fluid. I. Fluid of animals, A., III, 406.

and Kawashima, K., absorption of vitamin-C by the skin, A., III, 405. Seasonal variation in the vitamin-C content of human milk, A., III, 406. Vitamin-C content of colostrum, A., III, 406.

Nosu, S. I., Kawamura, R., and Fujii, H., "normal" lead [content] of cow's milk and milk preparations, A., III, 377.

Tatsumi, M, and Gammo, H, vitamin-Ccontent of [cerebrospinal] fluid. II. Fluid of monkeys suffering from hypovitaminosis-C, A., III, 406.

and Yasuda, I., total carbon dioxide content of [cerebrospinal] fluid, A., III, 377.

Kasai, K., formula for strength of mortar, B., 555.

Kasakova, V. A. See Gindin, L. G. Kasarnovski, J. S. See Kritschevski, I. R. Kasatotschkin, V., structure of inorganic

peroxides, A., I, 602. and Kotov, V., structure of potassium tetroxide, A., I, 225.

See also Rassudova, N.

Kasbekar, G. S., and Normand, A. R., reaction between nitric acid and tin in presence of catalysts. I., A., I, 251.

Kaschin. Sce Fedtschenko.

Kaschinski, P., change during the year of the salt content of the river Gruschevka, A., I, 154. Determination of content of alkali metals in water, and water from soil and sea mud, A., I, 154. Estimation of correctness of water analysis results, B., 397.

and Lazarev, K., results of analysis for the mud from Chansche and Gnilojo Seas (near Eisk) in 1932, and brine

tests, A., I, 154.

Kaschtanov, L. I., ozone-catalytic method under semi-industrial conditions, B.,

Ivanova, N. P., and Rishov, V. P., catalytic decomposition of ozone at

metal surfaces, A., I, 315. and Oleschtschuk, O. N., formation of intermediate products in oxidation of sulphur dioxide solutions by ozone, A., I, 41. Solubility of ozone in water and aqueous sulphuric acid of various concentrations, A., I, 407.

and Rishov, V. P., influence of high concentrations of sulphuric acid on velocity of oxidation of sulphur dioxido by oxygen in presence of bivalent manganese ions, B., 236.

Kase, T., metallic cementation. IV. Cementation by tin powder. V. Cementation by chromium powder, B., 47.

Kasehagen, L., action of aqueous alkali on a bituminous coal, B., 859.

Kashdan, M. G., production of ferro-coke in Factory No. 17, B., 311.

Kashevnik, L. D., protein metabolism and oxidative processes in experimental scurvy. V. Specific protein metabolism of muscle of scorbutic guinea-pigs, A., III, 59.

Kashimoto, S., and Kobayashi, third absorption bands of co-ordination compounds. IV. [Co dg2'pyCl], $\begin{array}{l} [\text{Co(NH}_3)_2(\text{NO}_2)_2\text{ox}]\text{NH}_2, \text{H}_2\text{O}, \\ [\text{Co ox}_3]\text{K}_2, 3.5\text{H}_2\text{O}, \text{A., I, 494}. \end{array}$

See also Tsuchida, R. Kashimura, A. See Matsuura, T.

Kasinathan, S., gum formation in cotton, B., 765.

Kasjanova, N. See Tiutiunnikov, B. Kasline, C. T., and Mellon, M. G., solutions for colorimetric standards. VII. Aqueous solutions of salts of elements 23-29. VIII. Arny's series, A., I, 49, 329.

Kaslow, M. Sec Ralli, E. P.
Kaspar, J. Sec Bernouilli, A. L.
Kasper, C., rapid electrodeposition of iron from ferrous chloride baths, B., 918.

Kasprzyk, K. See Przylecki, S. J. von.

Kassebart, R. See Diels, O. Kassel, H. See Konopicky, K.

Kassel, L. S. See Clarke, L., and Storch, H.H.

Kassell, B., and Brand, E., distribution of sulphur in crystalline insulin, A., III, 186.

See also Brand, E.

Kast, W., conditions for occurrence of an anisotropic liquid phase, A., I, 293. Anisotropic liquids, A., I, 501.

See also Kreutzer, K. Kasterin, N. P., generalisation of aëro-dynamic and electrodynamic fundamental equations, A., I, 399.

Kastler, A., visible fluorescence of mercury vapour, A., I, 2.

Kastorskaja, T. L. See Vilenski, V. A.

Kastrubin, M. See Kiesel, A. Kaswin, A. See Corteggiani, E., Gautrelet, J., and Mentzer, C.

Kaszuba, F.J. See Cerecedo, L.R. Katadyn, Inc. See Krause, G.A.

Kataev, M. L. See Tschitschkanov, P. P. Katagiri, H., and Kitahara, K., optical properties of fermentation lactic acids. V. Action of acetone-butyl alcoholproducing organism on optically active lactic acids, A., III, 71. Racemiase, an enzyme which catalyses racemisation of lactic acid, A., III, 311.

Masuda, Kosaku, and Himemoto, T., cytochrome-C. I. Is porphyrin-C an amino-acid porphyrin? II. Synthesis from protoporphyrin, A., III, 119, 194. Katai, K. See Okuda, Y.

Katalik, Ltd., catalytic composition for improving the combustion of solid fuels, (P.), B., 1008.

Katalinic, M., alleged curvilinear spreading of light rays in scattering media, A., I, 62. [Refraction of light by colloidal solutions], A., I, 182. So-called longi-

tudinal scattering of light, A., I, 564.

Kataluimov, M. V., boron as fertiliser,
B 166. Cause of injurious effects of overliming [of soils], B., 599.

See also Chalizev, A. A. Katayama, J. Sce Nagai, S. Katchalsky, A. Sce Frankel, M.

Kates, W. A., commercial-scale glass equipment, B., 910.

Kather, E., irradiated protein as oxidation catalyst of unsaturated acids, A., III, 253. Inactivation of insulin by irradiated protein, A., III, 438. Kathol, J., Logemann, W., and Serini, A.,

conversion from the androstane to the

pregnane series, A., II, 505.

Kathrein, G., structure of mortar and concrete as a polycomponent system, B., 675.

Kathsack, K. See Opitz, K. Katkova, K. I., glutathione and cathepsin of tissues during hyperthyroidism, A., III, 41. Tissue-glutathione and cathepsin after extirpation of the thyroid gland, A., III, 41.

Kato, H., utilisation of bagasse. VIII. Calculation of heat lost in the flue gases from burning bagasse. IX. Products from combustion of bagasse. X. Moisture in bagasse fuel and excess furnace draught, maximum obtainable temperature, and heat loss. XI. Flow of gas in the furnace. XII. Draught for bagasse boilers, B., 862, 999, 1153.

Kato, K., Miwa, S., and Negi, S., digestion of carbohydrates in mulberry leaves by silkworms. III. Growth and products of silkworms fed on mulberry leaves to which sucrose is added in different proportions. IV. Digestion of chemical components of mulberry leaves and composition of silkworms fed on leaves

with added sucrose, A., III, 470.

Kato, R. See Kafuku, K. Kato, S., and Someno, F., absorption spectrum and molecular structure. I. Aromatic amines, A., I, 597.

Kato, T., analysis of alkali metals, A., I, 631.

Kato, Y., electrolytic deposition of lead peroxide, (P.), B., 255. Katori, M. See Hatta, S.

Katori, S., and Ogine, Y., influence of the third metals on normalisation of cast structures of bronze, B., 683.

Katsura, B., uses of stainless steel, B., 919. Katsurai, T., distribution of concentration of colloids in sedimentation equilibrium produced by ultra-centrifuging, A., I, 303. Precipitation of ferric hydroxide, especially at temperatures above 100°, A., I, 564.

Katti, M. C. T. See Wali, M. A.

Katunski, V. M., causes of pre- and postfloral movements of peduncles and scapes [of the genera *Papaver*, *Crepis*, and *Tussilago*], A., III, 49. Development of the female gametophyte and production of the growth-promoting hormone by flower buds, A., III, 49. Dependence of photoperiodic reactions of plants on the spectral composition of light, A., 111, 409.

Katz, D., test baking. III. Human factor in test baking, B., 832.

Katz, D. L. See Brown, George G.

Katz, Gerhard, micro-bioassay of acetylcholine, A., III, 165.

and Katz, Gertrud, action of atropine and eserine on adrenaline secretion caused by potassium and calcium chlorides, A., III, 436.

Katz, Gertrud. See Katz, Gerhard.

Katz, H. See Franke, W. Katz, J. See Engl, J.

Katz, J. R., X-ray spectrography of soft natural rubber, B., 160. Amorphous part of starch in fresh bread, and in fresh pastes and solutions of starch, B., 1257. Change in X-ray pattern when starch preparations are dried (as a means of characterising with X-rays), B., 1257. See also Samec, M.

Katz, L. N., Lindner, E., and Landt, H., substance(s) producing pain in contracting skeletal muscle: bearing on angina pectoris and claudication, A., III, 200.

Katz, M. L., weak phosphorescence in the ultra-violet by the light-counting tube method, A., I, 113. See also Schein, M.

Katz, S. See Steacie, E. W. R. Katz, S. A., reaction for distinguishing between anabasine sulphate and nicotine sulphate, A., II, 314.

and Arontschikova, N. S., electrolytic determination of copper in copperarsenic preparations, B., 1073.

and Streltzova, A. I., preparation of calcium arsenato from white arsenic by oxidation with calcium oxychloride,

B., 904. and Weichherz, J., rapid determination of barium silicoflucride in the commercial product, B., 1044.

See also Kargin, V. A., and Weichherz, J. Katzaurov, L. N., orientation of α-iron crystals obtained by reduction of Fe₃O₄, A., I, 400.

Katzenberger, B., regeneration of used mineral oils, B., 111.

Katzenelbogen, S., and Muncie, W. S., blood-sugar curves in mental disorders, A., III, Ĭ24.

Katzin, M. M. See Schalfeev, V. M. Katzman, E., and Jacobi, M., determination of serum-calcium by titration with ceric sulphate, A., III, 196.

Katzman, P. A., determination of the gonadotropic material of urino of women after castration and the menopause and of normal men, A., III, 401.

See also Doisy, E. A.Katznelson, A. S. See Rochlina, M. L.

Katznelson, H. See Vandecaveye, S. C.

Katznelson, I. L. See Plotnikov, V. A.
Katznelson, M. M., and Bubinin, B.,
normal long-chain acids terminating
in cyclohexyl or cyclopentyl. I. cyclo-Hexylvaleric acid and derivatives, A., II, 148.

and Goldfarb, J. L., furan analogue of cocaine, A., II, 171.

and Kabatschnik, M. I., derivatives of lupinine, A., II, 171. See also Gertschuk, M. P., and Konda-

kova, M.

Kauchtschischwili, M., are reduction furnace in metallurgical and chemical industry, B., 1211.

Kauert, G., determination of final attenuation [of wort], B., 485. Rotatory power of wort and malt, B., 606.

Kaufert, F. See Schmitz, H.

Kauffmann, F., significance of ammoniacontaining nutrients for type-classification of the Salmonella group, A., III,

Kauffmann-Cosla, O., and Brull, R., action of petassium on metabolism, A., III, 315.

Kaufman, G. See Texas Co.

Kaufman, K. L., and Lee, C. O., precipitation in fluid extract of senna. II. Effects of various physical and chemical factors. III. Prevention of precipitation by addition of borax and other agents. IV. Nature and properties of the precipitate, B., 1131.

Kaufmann, C., menstruation with "artificial" corpus luteum hormone, A., III,

Kaufmann, F. See Graf, O.
Kaufmann, H. P., introduction of silicon into fats, A., II, 54. Diencometry and the diene value of fats, A., II, 273. Determination of unsaponifiable matter [in fats], B., 150. Fats. XXX. Diene synthesis with fats. II. Composition of tung oil, B., 257. Collaborate work of the Deutsche Gesellschaft für Fettforschung. II. Hexabromide number. IV. Hydroxyl number, B., 365, 938. Preparation of 1-phenyl-2:3-dimethylpyrazol-5-on-4-yl isopentyl [α-ethyl-n-propyl] ketone, (P.), B., 843. Standardisation of whale oil, B., 940.

and Baltes, J., fats. XXXI. Diene synthesis with fats. III. Oiticica oil, A.,

Baltes, J., and Büter, H., fats. XXXV. Diene synthesis with fats. IV. Determination of the diene value by iodometry; diene values of various fats and their interpretation. XXXVII. Polymerisation of fats. I. Heat-polymerisation of drying [fatty] oils, A., II, 272; B., 1077.

Baltes, J., and Josephs, F., diene value

of essential oils, A., II, 296.

Baltes. J., and Mardner, P., fats.

XXXIX. and XLI. Polymerisation of fats. II. Action of sulphur chloride

on fats. III. Action of gaseous sulphur chloride on fats, B., 1232.
and Fiedler, H., fats. XXXVI. Development of new German oil re-I. Grape-seed oil, sources. 1080.

and Funke, S., fats. XXXVIII. and XL. Determination of water in fats, butter, and margarine, and other substances. I. and II., B., 1232.

Kaufmann, H. P., and Grosse-Oetringhaus, H., fats. XXIX. Thiocyanogen iodide and its addition to unsaturated fatty acids, A., II, 47. Determination of unsaturated hydrocarbons in mixtures; thiocyanogen iodide in volumetric analysis, A., II, 359.

and Keller, M. C., reaction mechanism and equilibrium of fat hydrolysis, B., 462. Thermodynamics of fat hydrolysis, B., 805.

and Küchler, K., preparation of angelic acid, A., II, 272.

and Mestern, H. E., fats. XXXII. Preparation of unsaturated fatty acids by debromination of their addi-

tive products with bromine, A., II,

and Monsanto Chem. Co., angelic [a β -dimethylacrylie] acid, (P.), B., 1312. Kaufmann, (Frl.) L. See Endres, G.

Kauke, O. See Priess, H. Kauke, Y., chemical nature of aqueous solutions of carbonic acid, A., Î, 134. First dissociation constant of carbonic acid, A., I, 134.

and Airola, A. K., reference solution for determination of acidity in very dilute solution, A., 1, 43. Second dissociation constant of carbonic acid, A., I, 241, 461. $p_{\rm II}$ of reference solutions, A., I, 312.

and Mantere, V., determination of pressure of carbon dioxide in small amounts of liquids containing carbonic acid, A., I, 50.

and Yli-Uotila, T., change in carbon dioxide content of gas mixtures in steel containers, B., 34. Determination of atmospheric carbon dioxide by condensation, B., 133.

Kaunitz, H., excretion of mineral substances after administration of various salts and its relationship to inhibition of "serous inflammation" by vegetable

diets, A., III, 472. Kauppi, T. A., and Bass, S. L., evaluation of properties of ethylcellulose films by the use of load-elongation curves, B., Viscosity-concentration relations in ethylcellulose solutions, B., 1034.

See also Bass, S. L.

Kautsky, H., metabolic action between sensitiser and oxygen in light, A., III,

and Hormuth, R., chlorophyll fluorescence and assimilation of carbonic acid. VII. Dependence of the fluorescence curve of green leaves on oxygen pressure, A., III, 444.

and Marx, A., chlorophyll fluorescence and assimilation of carbonic acid. VI. Photographic registration and evaluation of time-intensity of fluorescence curves of green leaves, A., III, 240.

Kautter, C. T., carbonylic compounds, (P.), B., 1312.

See also Shell Development Co.

Kautz, K., development of austenitic welding, B., 561. Effect of iron surface preparation on enamel adherence, B., 1205.

See also Hessler, R. Kavanagh, F. See Robbins, W. J. Kaveler, H. H. See Haring, M. M. Kawabata, A. See Sumita, E.

Kawaehi, Y., Badger vacuum pipe still, B.,

Kawaguchi, M., low-temperature carbonisation at the Wanishi Iron Foundry, B.,

Kawaguchi, T. See Koizumi, E. Kawai, K., oil containing vitamins, (P.), B., 1369.

Kawai, Seiroku. See Yagi, S.

Kawai, Shinichi, and Sugiyama, N., compounds producing hypoglycamia. III. Synthesis of αζ-diguanidinoman-nitol hydrochloride, A., II, 138.

Kawakami, Y., recent developments of

stainless steel, B., 918. Kawamura, R. See Kasahara, M. Kawamura, S. See Asahina, Y. Kawasaki, T. See Nishizawa, K. Kawasé, H. See Endô, H.

Kawashima, K. See Kasahara, M.

Kawashima, R., effect of reaction and lime content of soil on yield and composition of several leguminous and green-manure crops and green maize, B., 709.

Kawczyk, M. Sco Meyer, Julius.

Kawe, A. See Rauterberg, E. Kay, H. See Hall & Kay, Ltd.

Kay, H. D., biochemistry of milk secretion, A., III, 341.

and Neave, F. K., phosphatase test [for pasteurised milk], B., 280.

Kay, W. C. See Beattie, J. A., and Smith, Leighton B.

Kay, W. M. Sec Brit. Driver-Harris Co. Kay & Ess Chemical Corporation. See Kittredge, H. G.

Kay-Fries Chemicals, Inc. Sco Peirce, J. 0.

Kaye, G. W. C., and Binks, W., ionisation measurement of y-radiation, A., I, 543.

Kayser, C., effect of variations in atmospheric temperature on respiratory quotient and alkaline reserve of the frog, A., III, 1.

See also Dontcheff, L. Kayser, E. See Koste, H.

Kayser, F. See Jullien, P

Kayser, H., and Ruth, G., behaviour of concrete under storage conditions determined by measuring changes in length, B., 243.

Kayser, H. G., Sec Rosin, P.

Kayser, M. E., detection of adulteration of human milk, B., 722.

Kazakov, A. V., and Isakov, E. N., chlorination of glauconite and phosphorite, B.,

Kazakov, N. U., modification of the Bunsen apparatus, and its application, A., I, 202. Kazakova, M. See Kirsanov, A.

Kazanskaja, A. V. See Tschitschkanov, P. P.

Kazanski, B. A., dehydration of dimethylcyclobutylearbinol, A., II, 140.

and Plate, A. F., aromatisation of homologues of cyclopentane and of paraffins in presence of platinised charcoal, A., II, 236.

Plate, A. F., and Gnatenko, K. M., synthesis of mono-substituted homologues of cyclopentane with branched

side-chains, A., II, 91. and Smirnova, N. V., hydrogenation of aromatic hydrocarbons by means of calcium-ammonia, A., II, 489.

Kazantzev, A. D. See Serdiuvkov, V. A. Kazarjan, L., preparation of acotylenic glycols. II., A., II, 318.
Kazarnovski, S. N., Efremova, T. N., and

Oks, R. S., determination of organic sulphur in hydrogen and gases containing hydrogen, B., 436.

Kazarnovski, S. N., and Golubev, A. A., acetylene in air-compression and -distillation plants, B., 665.

and Oks, R. S., removal of organic sulphur compounds from gas mixtures for ammonia synthesis, by sorption on active charcoal, B., 33.

Kaziro, K., and Shimada, T., oxidation of cholic and deoxycholic acid with CrO3; colour reaction of ketocholanic acid with

m-dinitrobenzene, A., II, 500.
Kazuno, T., sterol ("sapogenol") from
Shoyu oil, I., A., II, 417.

Sco also Shimizu, T.

Keane, J. See Breen, J., Kennedy, G., and Mohan, M.

Keane, J. C., and Brice, B. A., photoelectric grading of white sugars and their solutions by reflectance and transmittancy measurements, B., 962.

Kearney, T. H., and Scoffeld, C. S., choice

of crops for saline land, B., 71. Kearns, H. G. H., and Marsh, R. W., fruit-spraying programmes. I., B., 1106.

Marsh, R. W., and Martin, H., combined [fruit-spray] washes. III. (ii) Fungicidal and phytocidal properties of lime-sulphur-petroleum oil sprays. (iii) Hydrocarbon oils as supplements for rotenone-containing insecticides, B., 1107.

and Martin, H., use of sulphite lye as an emulsifier [for petroleum oil insecticidal

sprays], B., 1107.

Martin, H., and Wilkins, A., [insect] egg-killing washes. II. Ovicidal properties of hydrocarbon oils on Aphis pomi, De Geer, B., 710.

Sec also Forshaw, J. E. Keating, F. J. See Cooney, R. K.

Keating, W. B., discoloration of soap-wrap paper, B., 1190.

Keaton, C. M., influence of lead compounds on growth of barley, B., 1102. Keats, G. H., stereochemistry of thianthren,

A., II, 466.

Keay, J., choice butter, B., 1123.

Keck, W. E., Eggleston, G. C., and Lowry, W. W., flotative properties of hamatite,

and Jasberg, P., flotative properties of gypsum, B., 777. Flotative properties of magnetite, B., 917. See also Oldright, G. L.

Kedrinski, V. V., and Sabelnikov, E. D., synthesis of glycols based on technical unsaturated gases, B., 1308.

Kedrov, B. M. Sce Terentiev, A. P. Keefer, C. E., and Kratz, H., jun., clutriation of digested sludge, B., 734. Vacuum filtration of [sewage] sludge after various digestion periods, B., 846.

Waehter, F. C., and Dorr Co., Inc., sewage digester, (P.), B., 1140. Keele, C. A. See Floyd, W. F.

Keeley, T. C. See Daunt, J. G. Keenan, J. H., and Burns & Sons, J.,

cyclone separators, (P.), B., 197, 632. Keene, P. A., Julien, A. P., and Solvay Process Co., improving the purity of

calcium chloride brines, (P.), B., 542. Keenen, F. G., and Morgan, W. A., rate of dolomite reactions in mixed fertilisers, B., 596.

Keeney, E. L., Sherril, J. W., and MacKay. E. M., ketosis following fat ingestion by obese and non-obese patients, A., III, Keesom, W. H., and Bijl, A., vapour pressure of liquid nitrogen below one atmosphere, and of solid nitrogen β ; b.p. and triple point of nitrogen, A., I, 231.

and Guillien, R., electrical birefringence of mixtures of liquid oxygen and

nitrogen, A., I, 23.

Horst, (Miss) H. van der, and Taconis, K. W., volumes of mercury menisci, A., I, 405.

and Laer, P. H. van, relaxation phenomena in superconductivity, A., I, 403. Latent heat of tin in passing from the superconductive to the nonsuperconductive state at constant temperature, A., I, 404.

and Schmidt, G., heat conduction by rarified gases. II. Thermal accommodation coefficient of helium, neon, and nitrogen on glass at 70° to 90° abs.,

A., I, 72.

and Taconis, K. W., Debye-Scherrer exposures of liquid helium, A., I, 117, 224.

See also Kok, J.A.

Keeton, R. W. See Foley, E. F. Keffler, L. J. P., homology and isomerism in long-chain compounds. I. Thermochemical study of the n-alkyl esters derived from the monoethylenic monocarboxylic acids in C18, A., I, 464.

Kefford, J. F., and Rees, A. L. G., use of the glass electrode without valve ampli-

fication, A., I, 535.

Kegel, K., and Matschak, H., thermal conductivity of brown coal and its dependence on moisture content, B.,

Kehar, N. D., absorption and excretion of atebrin, A., III, 426. Influence of food in the stomach, A., III, 426.

Kehl, G. L. See Anderson, H. V.

Kehler, H., influence of sodium ions on ability of thin silver films to amalgamate, A., I, 459.

Kehm, E., ensilage of high-protein fodders, with special reference to cold fermentation in airtight chambers: evaluation of the product in feeding trials, B., 616.

Kehoe, R. D., later mill practice in dewatering and drying of [wood] pulps, B., 768. Automatic freeness-drainage control [in paper mills], B., 1036.

Kehr, R. W., detention of liquids being mixed in continuous-flow tanks, B., 96.

Kehren, determination and occurrence of manganese in textiles [for rubber-proofing], B., 336. Determination of copper in textiles, B., 533. Zinc soap or lime soap? B., 585.

Keiding, J., [determination of free acid in]

sodium aurichloride, A., I, 377. Keil, H. L., and Nelson, V. E., preservation of fertility in male and female rats on a supplemented milk diet, A., III, 22.

Keilholz, A., drugs useful in treatment of

gas victims, A., III, 89.

Keilin, D., action of sodium azide on cellular respiration and on catalytic oxidation reactions, A., III, 2.

and Hartree, E. F., properties of catalase hematin, A., III, 30. Reaction of nitric oxide with hemoglobin and methæmoglobin, A., III, 194. Preparation of pure cytochrome C from heart muscle and some of its properties, A., III, 200.

and Mann, T., hæmatin compound of peroxidase, A., III, 219.

Keillor, J., making coal, water-, and carburetted water-gas simultaneously, B., 105.

Keimatsu, I., synthesis of 6:7-methylenedioxy-1-3':4'-methylenedioxybenzyl)-3-methylisoquinoline (eupaverine) and 6:7-methylenedioxy-1-phenyl-3-methylisoquinoline, A., II, 33. See also Kondo, H.

Keimatsu, S., Ishiguro, T., and Nakamura, Y., constituents of hinokiol. VI., A., II, 21.

Keining, E., and Hope, G., injurious effects of sodium chloride and their prevention, A., III, 459.

Keir, J. M. See Union Carbide & Carbon Res. Labs.

Keiser, B. See De Groote, M.

Keith, H. M., and Stavraky, G. W., experimental convulsions induced by administration of thujone; influence of the autonomic nervous system on these convulsions, A., III, 216.

Keith, J. D. See Clayton, M. M., and Eagles, G. H.

Keith, J. R., and Roess, L. C., mol. wts. of viscous petroleum fractions, B., 866.

Keith, K. I., Kuhlman, A. H., Weaver, E., and Gallup, W. D., effect of cottonseed meal on dairy products, B., 1403.

Keith, P. C., jun., and Gasoline Products Co., treatment of hydrocarbon oils, (P.), B., 19, 646, 875.

See also Standard Oil Co.

Keitt, G. W., Blodgett, E. C., and Magie, R. O., epidemology and control of cherry leaf-spot, B., 1107. See also Palmiter, D. H.

Kekwick, R. A., and Pedersen, K. O., physico-chemical characteristics of the yellow respiratory enzyme, A., III, 69. Kelco Co. See Clark, D. E., and Green, H.C.

Kelham, R. M. See Mills, W. H.Kelkar, G. R., distinguishing chromones from coumarins, A., II, 257.

and Limaye, D. B., influence of an acyl group in the 3-position on reactions of chromones. I. Action of aluminium chloride on 7-acetoxy-3-acetyl-2methylchromone and a critical examination of the work of Wilson Baker, A., II, 257.

See also Limaye, D. B.

Kell, A. T. B., concentration of rubber

latex, (P.), B., 161. Kellaway, C. H. See Feldberg, W.

Keller, A. Sec Erk, S. Keller, C. H., and Minerals Separation North American Corp., froth-flotation concentration of ores, (P.), B., 1071.

Keller, E., system benzine-ethyl alcohol, B., 875.

Keller, E. H. See Bardenheuer, P. Keller, F., crazing and flaking of majolica fireplaces, B., 549.

See also Aluminium, Ltd., and Aluminum Co. of America.

Keller, H., effect of connective tissue on $p_{\rm H}$ determination in meat, B., 281. Removal of "boar odour" in the pickling process, B., 492. Physiological basis of manuring, B., 1250.

Keller, J. D., influence of material, shape, and size of chequer brick on heat transfer in regenerators, B., 671.

Keller, K. S. See Pietenpol, W. B.
Keller, M. C. See Kaufmann, H. P.
Keller, Rudolf (Basle), hydroxymethylene compounds, A., II, 247.

See also Todd, A. R.

Keller, Rudolf (Prag), electrically charged groups in normal and abnormal conditions, A., III, 10. Potassium-sodium contrast, A., III, 157.

Keller, T. P., and Gas Purifying Materials
Co., gas-purifying material, (P.), B., 1159.

Keller, W. D. See Swartzlow, C. R. Keller, W. H. See Spedding, F. H.

Kellermann, A., and Lange, E., adsorption of potential-determining ions, A., I, 612. Kellett, C. E., [blood] complement titre

in acute nephritis, A., III, 59. Kellett, E. G., colorimetric limit-test for free alcohol in esters, ethers, or ketones, B., 1308.

Kelley, I. D., jun., apparatus for spraying liquid by compressed air or gas, (P.), B., 401

Kelley, K. K., theoretical metallurgy. V. Heats of fusion of inorganic substances. VI. Revision of the entropies of inorganic substances-1935, A., I, 123. Calculation of the specific heats and entropies of metal vapours from spectroscopic data, with special reference to gaseous iron and copper, A., I, 404.

Kelley, M. D. See Levine, S. Z. Kelley, R. S., assay of spirit of ethyl nitrite, U.S.P. X, XI., B., 285.
Kellington, N. A. See Newell & Co., Ltd.,

Kellner, L., absorption spectra of four aldehydes in the near infra-red, A., I, 62. Near infra-red absorption spectrum of heavy water, A., I, 443. Infra-red spectrum and molecular structure of diketopiperazine and tetramethyldiketo-

piperazine, A., I, 495. Kellogg, C. M. See Shell Development Co. Kellogg, F. See Mether, S. R.

Kellogg, J. M. B. See Rabi, I. I.

Kellogg Co. See Wilder, H. K. Kellogg Co., M. W. See Hopkins, R. K.,

and Johnson, S. S., jun. Kellström, G., viscosity of air by the

rotating-cylinder method, A., I, 231. Kelly, A., treatment of alkali [borate] solutions [to remove silica], (P.), B., 1201.

Kelly, C. D., surface flora of Limburger cheese, B., 723.Kelly, D. F. See Reilly, J.

Kelly, E., and Parsons, H. T., refection in the rat, A., III, 469.

See also Lease, J. G., and Parsons, H. T. Kelly, F. C., and Dack, G. M., experimental Staphylococcus food poisoning; growth of a food-poisoning Staphylococcus and production of an enterotoxic substance in bread and meat, A., III, 36.

Kelly, F. H. C. See Hartung, E. J.

Kelly, H. E. See Sheehan, W. E.
Kelly, J. D. See Near, H. B.
Kelly, J. W. See Davis, R. E.
Kelly, J. W. (Washington), detection of Ephedra alkaloids in small quantities of

Ephedra, B., 618.
Kelly, W. See Haworth, R. D.
Kelly, W. N. See McGregor, G. H.

Kelly-Springfield Tire Co. See Hardman,

A. F.Kelp-Ol Laboratories, Inc., [enteric] coat-

ing for medical compound, (P.), B., 394*. Kelsall, A., improved form of arsenious oxide as an insecticide, B., 1389. Iron sulphate and lime-sulphur [fungicidal]

mixture, B., 1390. Keltch, A. K. See Krahl, M. E. Kelvie, J. D., and Republic Steel Corp., cleaning of stainless steel, (P.), B., 581.

Kemal, H., determination of isopropyl alcohol, A., II, 2. Acetone content of urine, fæces, and organs of dogs after administration of isopropyI alcohol, A.,

Kemel, V. K., distribution of rare-earth elements in certain auriferous deposits,

A., I, 156.

Kemet Laboratories Co., and Malloy, P. V.,

high vacuum, (P.), B., 1290.

Kemmer, F. R., and Magnesium Products, Inc., treatment of discrete [metal] particles and vapours, (P.), B., 148.

Kemmer, H., and Raschig, M., separation of hydrogen sulphide from gases, (P.), B., 1159.

Kemmer, N., interaction of nuclear particles, A., I, 492.

See also Azarov, K.

Kemmerer, A. R. See Fraps, G. S., and Irwin, M. H.

Kemmerich, W. E., azo-dyes [pigments and ice colours], (P.), B., 222.

Kemp, A. R., purified rubber for electrical insulation, B., 948.

and Ingmanson, J. H., high-speed vulcanisation of rubber, B., 1091.

See also Taylor, R. L., and Western Electric Co.

Kemp, I., and Twiss, D. F., surface composition of rubber globules in Hevea latex, B., 66.

Kemp, J. D., and Giauque, W. F., carbonyl sulphide; heat capacity, vapour pressure, heats of fusion and vaporisation; third law of thermodynamics and orientation equilibrium in the solid, A., I, 123.

and Pitzer, K. S., hindered rotation of methyl groups in ethane, A., I, 21. Entropy of ethane and the third law of thermodynamics; hindered rotation of methyl groups, A., I, 175.

See also Egan, C. J., and Witt, R. K. Kemp, T., and Pederson-Bjergaard, K.,

absorption and excretion of cestrone by the human organism, A., III, 491.

Kemp, W. C., and Leggett, A., grinding mills, (P.), B., 97.

Kempe, A. See Burwell, A. W.

Kempel, A. B., and Rex-Hide, Inc., rubber repair material, (P.), B., 161.

Kemper, H. See Streb, E.

Kemper, J., kneading and mixing machine with a tipping hopper[-truck], (P.), B.,

Kemper, M. O., appliance for measuring thickness of protective galvanic coatings,

Kempf, L. W., and Hopkins, H. L., density changes in solid aluminium alloys, B.,

Smith, C. S., and Taylor, C. S., thermal and electrical conductivities of aluminium alloys, B., 797.

See also Aluminum Co. of America.

Kempner, W., effect of low oxygen tension on respiration and fermentation of isolated cells, A., III, 90. Oxygen-transferring enzyme of respiration in plants, A., III, 95.

Kempster, H. L., and Funk, E. M., influence of cod-liver oil, lucerne meal, and yellow maize on production, hatchability, and quality of eggs, B., 1400. Kempte, K. See Sturm, A.

Kempton, A. E., Browne, B. C., and Maasdorp, R., angular distribution of protons and neutrons emitted in some transmutations of deuterium, A., I, 108.

Kempton, A. E., Browne, B. C., and Maasdorp, R., transmutation of the lithium isotope of mass seven by

deuterons, A., I, 108. Kempton, R. T. See Chambers, R.

Kemula, IV., action of ultra-violet light on aliphatic hydrocarbons. II. Universal apparatus for photochemical reactions of gases, A., I, 479, 480. and Dunicz, B. L., absorption spectra of

hydronaphthalenes, A., I, 217.

and Michalski, M., polarographic studies. IV. Exaltation of limiting currents; influence of oxygen on the limiting currents for different cations, A., I, 188.

Kendal, L. P., and Stickland, L. H., glycolysis. I. Apomyozymase and the coenzymes of glycolysis in muscle extract, A., III, 469.

Kendall, E. C., and Ingle, D. J., significance of the adrenals for adaptation to mineral metabolism, A., III, 388.

See also Allers, W. D., Ingle, D. J. Mason, H. L., Svirbely, J. L., and

Wilder, R. M.

Kendall, F. E., Heidelberger, M., and
Dawson, M. H., serologically inactive polysaccharide from mucoid strains of group A hamolytic streptococcus, A., III, 183.

See also Heidelberger, M.

Kendall, $J_{\cdot \cdot}$, pure liquids and liquid mixtures, A., I, 128. Ions and isotopes, A., I, 338.

Kendall, J. D., substituted malonic esters; [photographic sensitisers], (P.), B., 293. Sensitising photographic emulsions, (P.), B., 395. Dyes suitable for sensitising photographic silver halide emulsions, (P.), B., 1137. Dyes, (P.), B., 1137.

Kendall Co. See Reed, \hat{R} . \hat{E} .

Kendrick, A. B., and Hanke, M. E., determination of amino-nitrogen by Van Slyke's method, A., III, 108.

See also Foley, E. F.
Kenjo, M. See Suzuki, Kakuwo.
Kennard, D. C. See Bethke, R. M.

Kennard, J. H., reversal by progestin of responses of the non-pregnant uterus of the cat, A., III, 402.

See also Smith, G. van S. Kennard, T. G., and Howell, D. H., spectrographic examination of Siamese zir-

cons, A., I, 102. Howell, D. H., and Yaeckel, M. P., spectrographic examination of colourless and blue halite, A., I, 205.

Kennedy, E. R. See Frieman, R. H. Kennedy, G., Breen, J., Keane, J., and Nolan, T. J., chemical constituents of lichens found in Ireland; Lecanora sor-

dida, Th. Fr., A., II, 398. Kennedy, H. E. See Union Carbide & Carbon Corp., and Union Carbide &

Carbon Res. Labs.

Kennedy, J. N. See Iddings, C. Kennedy, M. H. See Mnnsell, H. E.

Kennedy, P. J. See Moon, V. H.
Kennedy, W. D., and Parks, G. S., heat of
mixing of dissobutylene and isooctane, A., I, 296.

See also Parks, G. S.

Kennedy, W. Q., greenalite-chert in Ordovician rocks, Scotland, A., I, 52.

and \mathbf{Dixon} , B. E., hydro-amphibole from South Devon, A., I, 156.

Kenner, J., correlation of the yellow oxidation enzyme with Warburg's co-enzyme, A., III, 96. See also Adamson, D. W.

Kennette, H. O., stock dyeing of rayon staple, B., 1195.

Kenny, M., Johnston, F. D., and Haebler, T. von [with Miles, A. A.], p-amino-benzenesulphonamide in treatment of Bacterium coli infections of the urinary

tract, A., III, 342.

Kenny, W. R., reagent for eliminating influence of high ammonia concentrations on potash results in short soil tests, B., 164.

and Reed, A. B., pH control of electro-

plating baths, B., 51. Kent, A. T. See Woodall-Duckham (1920), Ltd.

Kent, C. R., spontaneous ignition of hydrocarbon-air mixtures, A., I, 416.

Kent, E. E. See Whitford, A. C.

Kent, G. G., and Rupp, E. M., continuous versus periodic filtering [for dry-pressed porcelain manufacture], B., 1339.

Kent, N. A., spectrum of II₂ from 3612 to

4224 A, A., I, 157. Frye, R. M., and Robinson, W. H., structure of H_a of hydrogen, A., I, 435. and Lacount, R. G., interferometer wavelengths of certain lines in secondary spectrum of D₂ and HD, A., I, 207.

Kent, R. S., kiln retort structure, (P.), B.,

Kent, Ltd., G., Ivanoff, A., and Howard, G. P. E., apparatus for measuring and regulating moisture content of paper, (P.), B., ž9.

Kent-Jones, D. W., flour spoilage, B., 1397. Kenworthy, L., testing zinc coatings, B.,

Kenyon, J., Partridge, S. M., and Phillips, H., retention of asymmetry and inversion of configuration during anionotropic change; conversion of (-)a-phenyI-y-methylallyl alcohol into +)y-phenyl-a-methylallyl alcohol, A., II, 146.

Sco also Gerrard, IV.

Kenyon, J. N., effect of addition of lead on endurance limit of a certain tin-base bearing alloy, B., 246.

See also Karelitz, G. B.

Kenyon, W.O. See Eastman Kodak Co. Keogh, E. V., kinetics of formaldehyde disinfection of vaccinia virus, A., III,

See also Feldberg, W.

Kepfer, R. J. Sco Grasselli Chem. Co. Képinov, L., synergesis of adrenaline and pituitary hormone; adrenaline glycogenolysis, A., III, 228, 320. Antiglycogenolytic action of insulin, A., III,

Kepler, E.J. See Wilder, R.M.**Keppeler**, G, surface tension of glass, B, 545. and Schmidt, Hellmuth, deflocculation and "temporary stiffening" of clay slips, B., 911.

Keppler, A. See Werle, E.

Keramische Industrie-Bedarfs-Akt.-Ges., firing of porcelain or ceramic material in electrically or indirectly heated tunnel

furnaces, (P.), B., 347.

Keranen, J. E. See Richart, F. E.

Kerekow, F. W., determination of ethylene oxide, B., 522.

See also Wnrzschmitt, B.

Keresztes, T. von, modern mercerising processes, B., 897.

Keresztesy, J. C., and Sampson, W. L., utilisation of vitamin-B₁ from fullers' earth adsorbates, A., III, 439.

See also Sampson, W. L.

Kereszty, G. von, [medicated, etc.] soap tablets, (P.), B., 153.

Kerkhoven, C., removal of mucilage from vegetable oils and fats, B., 464.

Kerley, L. F., chemistry of beryllium with special reference to analysis of beryl, A., I, 632.

Kerly, M., effect of the cestrous cycle on the metabolism of isolated rat uterus, A., III, 437.

See also Glaister, D.

Kerman, E.J. See Kogan, A.I. Kermarec, R. See Lasausse, E.

Kern, A., micro-determination of lactose in milk, A., III, 57.

and Stransky, E., colorimetric determination of uric acid, A., II, 360. Action on metabolism of Carlsbad mineral waters. I. and II., A., III, 263, 423.

Kern, J. G. See Nat. Aniline & Chem. Co.

Kern, R. Sco Evans, E. I.

Kernaghan, M., surface tension of mercury in presence of nitrogen, hydrogen, and carbon dioxide, A., I, 552.

Kernkamp, H. C. H. See Christensen,

Kernot, J. C., albuminoid or protein material, (P.), B., 617.

Kerns, K. R., forcing flowering and fruit formation in plants, (P.), B., 827.

Kerone, E. B. W. See Olsen, F. Kerr, C. A. See Imperial Chem. In-

dustries. Kerr, G. A., filtration of vegetable tannin

solution, B., 161. Kerr, H. L., and Gardner, F., removal of sulphur compounds from petroleum distillates, (P.), B., 1162.

Kerr, P. F., attapulgus clay, A., I, 484.

See also Bray, R. H.
Kerr, R., and Macnaughtan, D. J., black anodic coatings on tin and tin alloys, B., 247.

See also Campbell, (Sir) John.

Kerr, R. W., and Internat. Patents Development Co., odourless corn starch, (P.), B., 1393.

Kerr, S. E., carbohydrate metabolism of brain. I. Determination of glycogen in nerve tissue, A., III, 19. Inorganic composition of blood. IV. Relationship between potassium and the acidsoluble phosphorus fractions, A., III,

and Ghantus, M., carbohydrate metabolism of brain. II. Effect of varying carbohydrate and insulin supply on glycogen, free sugar, and lactic acid in mammalian brain. III. Origin of

lactic acid, A., III, 19, 92. Hampel, C. W., and Ghantus, M., carbohydrate metabolism of brain. IV. Brain-glycogen, free sugar, and lactic acid as affected by insulin in normal and adrenal-inactivated cats, and by adrenaline in normal rabbits, A., III, 345.

Kerr, S. L., determination of relative resistance [of metals and alloys] to cavitation erosion by a vibratory method, B., 1356.

Kerr, T. See Bailey, I. W.

Kerr, W. R., panel spalling tests of insulating brick and insulating firebrick, B.,

and Common, R. H., effects of acid treatments for coccidiosis on hydrogenion content of the fowl intestine, A., Ш, 169.

Kerrin, J. C., and Gaze, H. W., modified tellurite medium for Corynebacterium diphtheriae, A., III, 226.

Kerris, W., improvement of final vacuum of oil-diffusion pumps by absorption of oil vapours with substances of largo

surface area, B., 508. Kerrison, O. C., [base-exchange] watersoftening apparatus, (P.), B., 306, 1288. Kerschbaum, F. P., Waggaman, W. H., Gooch, S. D., and Pembroke Chem. Corp.,

recovery of phosphorus from dilute gases, (P.), B., 239.
Kershaw, J. M. Sec Craven, E. C.
Kershaw, W. See Bleachers Assoc.
Kershaw, W. E., and Electric Storage

Battery Co., separative diaphragm for electrolytic cells, (P.), B., 694.

Kerslake, R., manufacture of paper and theory of beating, B., 125. Kerst, D. W. See Herb, R. G.

Kerstein, N. A. See Piper, J. D.

Kersten, H., and Dwight, C. H., viscosity of sols made from X-irradiated agar, A., I, 460.

and Young, W. T., electrical conductivity of nickel-sulphur electrodeposits, B.,

See also Dwight, C. H., Hare, D., and Long, T. P.

Kersting, F., adsorption of dyes on cell-walls and influence of inorganic salts, A., III, 328.

Kertesz, Z. I., Dearborn, R. B., and Mack, G. L., vitamin-C in vegetables. IV. Ascorbic acid oxidase, A., III, 78.

Kerth, M., colloresin DK-a synthetic thickening agent as the solution of special [textile printing] problems, B.,

Kertscher, F., simplified planting of Neubauer [culture] vessels, B., 1099.

Kervegant, D., rum of "grand arôme" type, B., 486.
Kerwin, F. C., liberation of oxygen from

sodium perborate [in tooth powder], (P.), B., 666. Kesarev, V. V. See Salkind, J. S.

Kessel, H., passage of current through thin aluminium oxide layers in discharge tubes, A., I, 221.

Kessel, J., stencils for printing textile fabrics, (P.), B., 433.

Kessel, W., hyperfine structure of bands, A., I, 386. Rôle of absorption of the exciting line in resonance spectra. II., A., I, 386.

Kessler, F. See Rummel, K.

Kessler, L. H., the "odecometer": its place in control of activated-sludge plants, B., 1413.

Kessler Chemical Corporation. Sco Goldschmidt, Stefan.

Kessner, A., significance of surface-hardening with the acetylene-oxygen flame in the machine industry, B., 688.

Kester, E. B., and Koppers Gas & Coke Co., phenols, (P.), B., 528.

See also Koppers Gas & Coke Co. Kestner, O., tissue-selective or specific healing agents, (P.), B., 392.

Keston, A. S. See Schoenheimer, R. Kesztler, F. See Späth, E.

Kesztyüs, L., and Martin, J., fat and lipin metabolism in dogs with Eck fistulæ, A., III, 173.

Ketelaar, H., scattered y-radiation, A., I, 275. See also Stahel, E.

Ketelaar, J. A. A., crystal structure of silver nitrite, A., I, 400. Crystal structure of the ethyl sulphates of the rare earths and yttrium, A., I, 502. Crystal structure of alloys of zino with the alkali and alkaline-earth metals and of cadmium with potassium, A., I, 508.

and Hanson, E. A., elementary cell and space-group of ethylchlorophyllide, A., I, 502.

Rietdijk, (Frl.) A. A., and Staveren, (Frl.) C. H. van, crystal structure of ammonium, potassium, rubidium, and cæsium stannibromides, A., I, 604.

and Willems, P. J. H., anomalous mixed crystals in the system SrF2-LaF3, A., I, 177.

Ketiladge, D. See Shan, H. C. Ketkar, V. V. See Godbole, N. N.

Kettenmeyer, G. See La Barre, J. Kettenring, I. C. See Standard Development Co.

Kettle, S., analysis of red lead, B., 699. Kettner, S. Sec Borsche, W.

Keutmann, E. H., Bassett, S. H., Julian, G. E., Present, C. H., and Van Alstine, H. E., dietary protein in hæmorrhagic Bright's disease. II. Effect of diet on serum-proteins, proteinuria, and tissue-proteins, A., III, 204. Keutmann, H. See Dobriner, K.

Keutner, E., and Potapenko, G., dipole loss and molecular structure, A., I, 498.

Key, A., Etheridge, W., and Eastwood, A. H., 6th report of the [Gas] Liquor Effluents and Ammonia Committee [of the Institution of Gas Engineers], B., 93.

See also Happold, F. C., and Institution of Gas Engineers.

Keyes, F. G., Gerry, H. T., and Hicks, J. F. G., jun., low-temperature studies. I. Production of liquid hydrogen without expensive equipment, B., 1045.

Keyes, G. H., and Brooker, L. G. S., eyanine dye series. VIII. Dyes derived from 1-methylphenanthro-[9:10]-thiazole, A., II, 124.

Keyes, H. E., treatment of [iron] ores and similar materials [to produce sponge iron], (P.), B., 689.

Keys, A., exchanges between bloodplasma and tissue-fluid in man, A., III, 261. Apparent permeability of the capillary membrane in man, A., III, 387. Properties of the gill membranes of fishes, A. III, 387. Micro-determination of chlorides in biological materials, A., III, 410. See also Roughton, F. J. W.

Keyser, F. See Busch, M.

Keyser, L. S., laboratory stirrer and m.p. bath, A., I, 202.

Khainovsky, V., apparatus for pH control in the cane-sugar factory, B., 716.

Khambata, (Miss) B. S. Seo Benford, G. A.

Khan, A. W. See Gaind, K. N.

Khanna, M. L. See Bhatnagar, S. S.

Khanolkar, R. R., Barve, P. M., and Desai, B. N., condition of sparingly soluble substances in gels. I. Silver chromate in gelatin, A., I, 28.
Kharasch, M. S., Alsop, W. G., and Mayo,

F. R., hydrolysis of carbon tetraiodide, A., II, 363.

Brown, W. A., and McNab, J., exchange reactions in deuteralcohol, A., II, Kharasch, M.S., Conway, E.A., and Bloom, W., chemical factors influencing growth and pigmentation of micro-organisms, A., III, 271.

and Lilly & Co., E., stabilising epinephrine-type compounds, (P.), B., 842.

Mansfield, J. Y., and Mayo, F. R., cis-trans isomerisation by bromine

atoms, A., II, 332.

Margolis, E. T., and Mayo, F. R., peroxide effect in the addition of reagents to unsaturated compounds. XIII. Addition of hydrogen bromide

to butadiene, A., II, 173.

Margolis, E. T., White, P. C., and Mayo, F. R., peroxide effect in halogenation of aromatic side chains,

A., II, 373.

May, E. M., and Mayo, F. R., addition of thiocyanic acid to olefinic double bonds, A., II, 404.

and Porsche, J., hydrolytic instability of carbon-to-carbon linking, A., II, 15. and Potts, W. M., peroxide effect in the addition of hydrogen bromide to ethylene compounds. XIV. Addition of hydrogen bromide to the higher alkenes, A., II, 479.

Sternfeld, E., and Mayo, F. R., peroxide effect in the rearrangement of abromoacctoacetic ester, A., II, 440.

See also Du Pont de Nemours & Co., E. I., and Weinhouse, S.

Khastgir, S. R., origin of uni-polar electrical conductivity of carborundum, A., I, 114.

See also Chakravarty, M. K., and

Imam, A. Kheifetz. Sec under Cheifetz. Khodschaian, S. See Kornfeld, G.

Khorazo, D. See Meyer, Karl. Khouvine, Y., reduction of a-d-gluco-heptulose in presence of Reney's nickel, A., II, 230.

and Ephrussi, B., fractionation of substances which intervene in the optical pigmentation of Drosophila melanogaster, A., III, 216.

Ephrussi, B., and Harnly, M. H., extraction and solubility of the substances present in the pigment of the eyes of Drosophila melanogaster, A., III, 168.

Kibi, M., varieties of Aspergillus oryzæ employed in Shōyu manufacture. I.,

Kibirkschtis, S. G. See Andreev, N. N. Kick, C. H. See Bethke, R. M.

Kidani, Y., and Smekal, A., strain double refraction due to small crystal deformations, A., I, 449.

Kidd, F., principles of apple storage, B., 614. and Hanes, C. S., p_{jj} in apples, A., III, 441.

and West, C., temperature and duration of life in apples, B., 282. Cold storage of English-grown Conference and Doyenne de Comice pears, B., 282. Gas-storage of English-grown Conference pears, B., 282. Refrigerated gas-storage of fruit, B., 389. Coldstorage and gas-storage of English-grown William's Bon Chrétien pears, B., 1264.

See also Hanes, C. S., and Zilva, S. S. Kidd, H. V., mechanism of the diazoaminobenzene conversion, A., II, 494.

Kidd, T. J., separator [for cereals], (P.), B., 740.

Kidde & Co., Inc., W. See Grant, H. C., jun.

Kidney, A.J., buying of tinplate for packing cured meats, B., 724.

Kidokoro, M. See Sameshima, J.

Kidson, E. B., cobalt status of New ZeaIand soils, B., 954.

Askew, H. O., and Dixon, J. K., colorimetric determination of cobalt in soils and animal organs, B., 706.

See also Askew, H. O.

Kiech, C. F., and Petroleum Rectifying Co. of California, apparatus for treating [petroleum, etc.] emulsions, (P.), B., 1303.

Kieffer, E. See Czech, J. Kieft, A. W. See Thomas & Co., R. Kiehl, H. R., electrical conductivity of glass. III. Current-voltage relationships with highly resistant layers, B., 344.

Kielland, J., individual activity coefficients of ions in aqueous solutions, A., I, 565. Chemical hydration numbers, A., I, 616. Kiemstedt, II., treatment of technical hydrocarbons, especially for the purpose of practically completely drying them by means of solid and aqueous caustic alkalis, B., 204.

Kienberger, L., practical calculations on burning wood, B., 744.

Kienitz, G. A., [production of] beech-cellulose by alkali decomposition, B.,

Kientz, J. C., jun., and Superior Steel Corp., annealing [stainless] steel, etc., (P.), B., 1070.

Kienzle, R., destruction of electron space charges by positive ion rays, A., I, 592. Kiepenheuer, K. O., solar radiation between 2000 and 3000 A, A., I, 590. Counter tubes for the visible region of the spectrum, A., I, 635. Kiernan, H. G. See Nat. Aniline & Chem.

Kiernan, J. A., modern thickenings, B., 1326. Kiersted, W. See Gee, W. P.

Kiese, M., absorption of g-strophanthin by the liver, A., III, 65.

Gummel, H., and Garan, R. S., absorption of ouabain (Gratus-strophanthin) by the liver in heart-lung-liver preparations, A., III, 267.

See also Hinsberg, K.

Kiesel, A. [with Agatov, P., Bezinger, E., and Kastrubin, M.], variations in amino-acid composition of plant proteins, and their causes, A., III, 162.

and Paschevitsch, V., differences in amino-acid content of the leaf proteins of male and female homp plants, A., III, 446.

and Roganova, D. P., action of the trypsin-enzyme complex on substituted proteins, A., III, 140.

Kieser, K., testing of bromine compounds intended for photographic purposes, B., 1136. Determination of silver in [photographic] fixing baths, B., 1275. Regeneration of photographic fixing baths, (P.), B., 1411.

Kiesselbach, T. A., Petersen, N. F., and Burr, W. W., bindweeds and their control, B., 172.

Kiessling, W. See Meyerhof, O.

Kik, M. C. See Sure, B. Kiketz, V. A., electrochemical study of the systems $KCl-AlBr_3$, $KBr-AlBr_3$, and KI-AlBr₃, in benzene, A., I, 187.

Kikkawa, H., production and fabrication of stainless steel, B., 918.

Kikoin, A. K. See Schubnikov, L. V.

Kikoin, I. K., Hall effect in nickel in the neighbourhood of the Curie point, A.,

Kikuchi, K. See Saegusa, Hikoo.

Kikuchi, R., hardness of pressed lumps of metal powders, B., 1068.

Kikuchi, Seishi, Aoki, H., and Husimi, K., emission of β -rays from substances bombarded with neutrons, A., I, 4. Energy differences in addition of neutrons, A., I, 278.

Aoki, H., and Takeda, E., interaction of neutron with deuteron, A., I, 211. Kikuchi, Shin-ichi. See Kameyama, N.

Kikuchi, T., effect of heavy colloidal metals on growth of transplanted tumours and their radiosensitivity, A., III, 12.

Kilde, G., determination of calcium-ion concentration. II. Dissociation of calcium lactate, A., I, 29.

Kilgren, T. E., production of pressuretight eastings in 30% cupro-nickel, B.,

Killeffer, D. H., sandpaper, B., 1053. See also Martin, J. W.

Killian, T. J., pressure control and indicator, A., I, 583.

Killick, E. M., acclimitisation of the human subject to atmospheres containing low concentrations of carbon mon-

oxide, A., III, 109.

Killingstad, A. See Steinkopf, W. Kilpatrick, M., acidity in non-aqueous solution, A., I, 616.

See also Krieger, K. A., Mason, R. Burgess, Panepinto, F. W., and Selar, M. Kilpi, S., and Meretoja, A., dissociation

constant of acetic acid in water-acetic acid mixtures, A., I, 29. Electrolyte action with acetic acid. I. Dissociation constant in aqueous ammonium and alkali chloride solutions, A., I, 516.

and Warsila, H., dissociation constant of acetic acid and ionic product of solvent in water-ethyl alcohol mixtures, A., I, 29.
Kim, C. H., enzymic hydrogenation of

dehydrodeoxycholic acid by yeast, A., III, 431.

Kim, M. S. See Gray, J. Kimball, C. S., abrasives for metal polishing, B., 1052.

See also Snell, F. D. Kimball, G. E., bimolecular association reactions, A., I, 415.

See also Roberts, Irving.

Kimball, J. H. See Gregory, T. R. Kimball, R. H., Wittenburg, H. H., and MaeFadyen, D. E., semi-micro- and micro-Carius determination, A., I, 147.

Kimball, T. B. See Kaasa, O. G., and Texas Co.

Kimberly, A. E., and Scribner, B. W., preservation of records, B., 771.

See also Scott, R. D. Kimble Glass Co., surface condensers, (P.),

B., 1148.

Klme, J. A. See Evenson, O. L. Kimenkowski, E. See Röhling, J.

Kimmel, L. See Morgan, A. F. Kimmel, S. C. See Nat. Aniline & Chem.

Co.

Kimmig, J. See Wieland, H. Kimura, G. G., progestin in cows' corpora lutea, A., III, 74.

Kimura, I., development of distillation processes in the petroleum industry, B., 10.

Kimnra, K. See Arakatsu, B.

Kimura, O., influence of electric field on

viscosity of liquids, A., I, 405.

Kimura, S., preparation of vanillin. I.— III., A., II, 457. Preparation of terpin hydrate from white camphor oil, B.,

Kimura, T., preparation of straw-cellulose. II. Treatment with chlorine gas and sodium hydroxide, B., 1186.

Kimura, Toshizo, β-hyodeoxycholie acid from pig's bile, A., III, 377.
 Kimura, Tsuneyuki, improved cyanine

synthesis (mixed solvent process); reaction of orthothioformic ester, A., II, 473.

Kimura, Yukichi, biological action of radiation from radioactive substances. II. Effect of β - and γ -radiation from monazite sand and samarskite on rate of growth and œstrus cycle of mice, A., III, 214. Effect of potassium on the aërobic glycolysis of brain tissue with reference to the radioactivity of potassium, A., III, 474.

Kimura, Yushiro, and Hoshi, M., alpinone, a benzopyrone derivative, A., II, 70. Kinahan, J. C. See Du Pont de Nemours

& Co., E. I.

Kinaird, F. W., Aull, J. C., jun., and Erve, J. van de, relation between urinary creatinine and total body-creatine, surface area, and body-weight, A., III, 18.

Kincaid, J. F., and Eyring, H., partition function for liquid mercury, A., I, 452. See also Gibson, R. E., and Hirschfelder, J. O.

Kincaid, R. R., toxicity of mercury vapour to germinating tobacco seeds, A., III, 106.

Kind, V. V., resistance of puzzuolana-Portland cements to chemical attack, B., 552. Action of magnesium salts on puzzuolanie Portland cements, B., 784. Stability towards mineral salts of puzzuolanic Portland cement with additions of burnt clay, B., 784. Calculation of the mixture of raw materials for production of Portland cement clinker, B., 784.

See also Zaporoshetz, I. D.

Kind, W. A., special cements for hydraulic structures, B., 785.
Kinder, E. See Jaumann, J.

Kiudermann, V. See Eichbaum, F.

Kindl, F., hyperglycamia caused by bleeding, A., III, 195.

Kindler, H., dependence of magnetic aftereffect on inner strains, A., I, 173.

Kindler, K. [with Ellinger, K. G., Fürst, W., and Schmidt, Hans], tenacity of Hydrolysis of esters and reduction of nitro-compounds, A., II, 60.

Kindscher, $\hat{E}_{\cdot \cdot}$, standardisation of methods

of testing rubber, B., 702. Kinetic Chemicals, Inc., organic fluorine compounds, (P.), B., 524.

Sec also Holt, L. C.

Kinetic Elutriators, Ltd., and Carnegy-Potts, A. W. K., elutriating apparatus, (P.), B., 1288.

King, A., and Clewes, A., low versus high discharge for ball mills, B., 852.

King, Alexander, chemisorption on charcoal. VIII. Influence of temperature on catalytic oxidation of salts; catalytic decomposition of hydrogen peroxide. IX. Influence of temperature of activation on sorption of acids and bases, A., I, 76, 561. See also Anderson, J. S.

King, Allen, and Rayton, W. M., ranges and straggling coefficients of a-particles, A., I, 388.

King, A. E. See Christensen, King, A. J. See Miller, W. S. See Christensen, B. E.

King, A. M. See Francis, F. King, A. S., spectroscopic examination of meteorites, A., I, 203.

See also Albertson, W., King, R. B., and McCoy, H. N.

King, C. G. See Fenton, F., Gould, S., Lyman, C. M., Musulin, R. R., Selleg, I., Sigal, A., Stotz, E., and Tressler, D. K.

King, C. M. See Porter, R. H.
King, C. S., neutralising value of monocalcium phosphate, B., 1044.
King, C. V., and Brodie, S. S., rate of solution of benzoic acid in dilute aqueous alkali, A., I, 456.

and Catheart, W. H., rate of solution of magnesium in acids, A., I, 143.

and Howard, P. L., heat-transfer and diffusion rates at solid-liquid boun-

daries, B., 195.

King, D. F., and Cottier, G. J., supplemental value of peanuts to laying ration [of hens], A., III, 209.
King, E. C. See King, R. J.
King, E. J., solubility of silica dusts, A.,

I, 560.

and Haslewood, G. A. D., permanent standards for turbidimetric determination of protein, A., III, 52.

See also Haslewood, G. A. D.

King, F. B., obtaining a panel for judging flavour in foods, B., 1128.

Coleman, D. A., and LeClerc, J. A., report of United States Department of Agriculture bread-flavour committee,

Loughlin, R., Riemenschneider, R. W., and Ellis, N. R., relative value of various lards and other fats for deepfat frying of potato chips, B., 81. Whiteman, E. F., and Rose, W. G., cake-

making quality of eggs as related to some factors in egg production, B., 387.

King, F. E., and L'Ecuyer, P., α - and β -hydroxylaudanosines. II. Products of exhaustive methylation, A., II, 218.

King, George (Birmingham), silicon ester as paint medium, B., 156.

King, George (London), a-ketol earboxylic acids. I. θ-Hydroxy-ι-keto- and ι-hydroxy-θ-keto-stearic acids, A., II, 48.

King, G. B., system ammonia-selenic acid-water at 30°, A., I, 518.

See also Gelbach, R. W.

King, G. W., anharmonieity constants of the potential function of the water molecule, A., I, 397. Potential function of the water molecule, A., I, 397

King, H., curare alkaloids. III. Potcurare, A., II, 474.

and Stiller, E. T., synthesis of norharmancarboxylic acid and its bearing on the constitution of lysergic acid, A., II, 210.

See also Rosenheim, O.

King, H. H., proteins of eggs with special reference to deterioration under coldstorage conditions, B., 1400. Caldwell, M. J., and Perkins, A. T.,

replaceable-base determination soils] by electro-migration, B., 706.

and Perkins, A. T., replaceable cations and anions in some Kansas soils, B., 1383. Plant-nutrition investigations, B., 1386.

See also Perkins, A. T

King, J. C. See Cawley, C. M.

King, J. D., dietary factors in production of dental disease in experimental animals, with special reference to the rat. I. Dental caries, A., III, 123.

King, J. G., distribution and properties of British coals, B., 513. Flexibility and balance in the gas industry, B., 1153.

and Jamieson, J., low-temperature carbonisation of Scottish cannel, B., 1293. See also Sinnatt, F. S.

King, L. P., and Shih, Y. K., pharmacology of an alkaloid isolated from Chinese fengfangchi, A., III, 217.

King, N., structure of milk-air interface, A., III, 201.

King, P. E. See Hirst, H. R. King, P. H., and Taylor, G. E., cellulose acetate compositions, (P.), B., 700.

King, R., absolute method for measuring dielectric constants of fluids and solids at ultra-high frequencies, A., I, 428.

King, R. A. See Patterson, W. C. King, R. B., and King, A. S., photometry of electric furnace absorption multiplets, A., I, 157.

See also Russell, H. N.

King, R. J., King, E. C., and King Co., R. J., rubber cement, (P.), B., 592.

King, R. M., mechanics of enamel adherence. XIII. Review of the theoretical explanations for formation of metal particles in "cobalt" groundcoats and some pertinent experiments, B., 345. King, T., and Ouellet, C., sorption of

deuterium oxide by cellulose, A., I, 299. King Akt.-Ges., E., cyclone separators, (P.),

B., 857. King Co., Inc., R. J. Sec King, R. J. Kingcome, H. A., evaporators, (P.), B., 995.

Kingery, L. B. See Mosher, W. A. Kingisepp, G., effect of asphyxia on the

sinus and conducting tissue of the frog heart, A., III, 215.

See also Clark, A. J. Kingman, F. E. T., effect of promoters on molybdenum catalysts as used in hydro-

genation, A., I, 369.
Kingsbury, F. H. See Adams, G. O.
Kingsbury, P. C., ceramic linings for

chemical equipment, B., 912.
Kingsbury, R. M., gas thermoregulator, A., I, 478.

Kingslake, R., optical problems in industrial research, B., 1409.

and Conrady, (Miss) H. G., refractometer for the near infra-red, A., I, 535.

Kinh, N. K. See Guichard, F. Kiniak, A. I. See Tschirkov, S. K. Kinker, C. C., and Owens-Illinois Glass

Co., revolving [glass-melting] pot, (P.), B., 672

Kinnear, H. B., and Gillett, H. W., cupola hot-metal duplexing for the electric steel foundry, B., 142. Kinney, C. R., and Adams, R., dideutero-

valine and dideuteroleucine, A., II, 281.

Kinnison, A. F., and Albert, D. W., fertiliser studies with grapefruit in the Salt River valley, Arizona, B., 601.

Kino, K., polymerisation of methyl esters of higher unsaturated acids. Polymerisation products [obtained by heating] methyl esters of linseed fatty acids. XIX. Increase in iodine value of the hydrogenated intermolecular polymerised ester. XX. Lower-boiling fraction obtained by heating the methyl esters of linseed oil fatty acids, A., II, 47; B., 806.

Kino, K., ketones from higher fatty acids. II. Comparison of the degrees of decomposition of the carboxyl group during the action of iron or magnesium powder on higher fatty acids at high temperatures. III. Preparation of ketones from the fatty acids of hydrogenated sardine oils. IV. Preparation of ketones from the fatty acids of coconut oil and of hardened rape-seed and soya-bean oils, A., II, 443, 483. Corrosion tests of some metals and alloys by a higher fatty acid at 330-340°, B., 1355.

Kinoshita, Kono, physiological and biochemical investigations of Aspergillus itaconicus. II., A., III, 355.

Kinoshita, Kyoji, end-point voltage of the lead-acid storage cell, B., 459. Silver oxide positive of the alkaline accumulator. I. and II., B., 802, 1362.

Kinoshita, M., and Oishi, J., expansion and pressure coefficients of nitrogen, hydrogen, helium, and neon, and the absolute temperature of 0°C, A., I,

Kinsey, E. L., and Ellis, J. W., infra-red absorption spectra of [eight aliphatic] alcohols, [formic and acetic] acids, and their solutions in carbon tetrachloride, A., I, 393. Rotation of water molecules in carbon disulphide solution, A., I, 443.

Kinsey, V. E. See Bancroft, G. H. Kinsman, J. M. See Wakerlin, G. E.

Kinugasa, T. See Nozoe, T.

Kluze, L. Sec Hess, K.

Kinzel, A. B., and Electro Metallurg. Co., treatment of steel-making slags, (P.), B., 248.

and Moore, R. W., graphite in low-carbon steel, B., 1350.

See also Union Carbide & Carbon Corp. Kinzer, G. D., and Almy, G. M., band

spectrum of As₂, A., I, 589. Kinzie, C. J., and Commons, C. H., jun., effect of zirconium and titanium compounds on a glaze, B., 345.

Hake, D. S., and Titanium Alloy Manuig. Co., titanium compound and its manufacture, (P.), B., 909. and Titanium Alloy Manufg. Co., zir-

conium silicates [zircon], (P.), B., 668. Purification of zirconium silicates [zircon], (P.), B., 668. Metallurgical scavenger, (P.), B., 1070.

Klpfer, P. See Stahel, E. Kipphan, E. See Becker, A.

Kipphan, H. See Schnegg, H. Kipping, F. B., stereoisomeric 2:3:5:6tetramethylpiperazines. V., A.,

Kipping, F. S., organic derivatives of silicon, A., II, 282.Kiprianov, A. I., alkamino-acids (hydroxy-

alkamino-acids); their synthesis and reactions, A., II, 402.

and Raschkovan, B. A., application of the cyanohydrin method to synthesis of alkylamino-acids (hydroxyalkylamino-acids), A., II, 309.

and Schusser, R., influence of the anion on properties of thiocyanine dyes, A., ÎI, <u>1</u>71.

and Sitsch, E. D., cyanine dyes from amino-derivatives of benzthiazole, A., II, 434. Cyanine dyes from isomeric

dimethylbenzthiazoles, A., II, 434. Kirby, G. W., and Atkin, L., preparation of galac yeast, A., III, 70.

Kirby, G. W., Frey, C. N., and Standard Brands, [bakers'] yeast, (P.), B., 177. See also Schultz, A.

Kirby, J. E. See Du Pont de Nemours & Co., E. I.

Kirchberg, H., mineral separation based on thermal properties, B., 927.

Kirchner, F., submicroscopic roughness of metallic surfaces and its effect on electron interference pattern, A., I,

Kirchoffer, W. G., use of beds of manganese ore in iron and manganese removal [from water], B., 192.

Kirchrath, H., materials for electric furnaces, B., 581.

Kirigin-Mardegani, J. Sec Pavelka, F. Kirillov, I. P. See Pestnikov, V. F.

Kirilov, E. A., and Polonski, A. M., effect of plastic deformation on inner photoeffect in silver chlorido single crystals, A., I, 114.

Kirilov, M. M., determination of titre of permanganate solutions by means of ammonium oxalate, A., I, 150.

Kiritschenko, E. I. See Plotnikov, V. A. Kiritschenko, I. P., experiments on a small coal panel at Lisitschansk mine (on underground gasification), B., 746. Watergas at Lisitschansk coal mine, B., 746.

Kiritschenko, N., and Benkovski, S., oxidation of sulphur dioxide in the chamber process, B., 133. Aqueous absorption of nitrogen oxides in conversion plants, B., 236.
Kiritschenko, O. I. See Zosimovitsch,

D. P.

Kirjan, V. M. See Hefter, J. M. Kirk, E., amino-acid clearance, A., III, 210. Amino-acid and ammonia metabolism in liver diseases, A., III, 210. See also Page, I. H., and Van Slyke, D, D

Kirk, E. W. See Brit. Celanese.

Kirk, P. L., and Bentley, G. T., quantitative drop analysis. V. Determination of iron in simple and biological media, A., I, 329.

See also Bentley, G. T., Cunningham, B., Giragossintz, G., Heck, K., Holmes, B., Lindner, R., and Manov, G. G.

Kirk, R. C., decomposition potentials of

fused salts. I.—III., A., I, 520. Kirkpatrick, E. C. See Richards, W. T. Kirkpatrick, H. A. See Du Mond, J. W. M. Kirkpatrick, P., and Ross, P. A., quantum limit of the continuous spectrum, A., I, 214. X-Ray double spectrometer with stationary source and ion chamber, A., I, 534.

Ross, P. A., and Ritland, H. O., characteristics of the Compton modified band,

A., I, 55.

Kirkpatrick, W. F. See Shimwell, J. L. Kirkwood, J. G., theory of optical rotatory power, A., I, 397.

Kirner, W. R., microchemical balance room, A., I, 429.

Kirrmann, A., allylic transposition. Allylidene diacetate, A., II, 175. and Jacob, R., allyl change: a tri-

chloroisobutene, A., II, 81.

Kirsanov, A., action of phosphate on plants in soils containing different concentrations of hydrogen, calcium, nitrogen, and iron, B., 1384.

Blagovestschenski, V., and Kazakova, M., effect of soil moisture content on physiological processes and chemical composition of sugar-beet, A., III, 157.

Kirsanov, A. V., and Ivastchenko, J. N., diaminomethane and its derivatives. II. α-Aminopiperidine and the products of reduction of a-aminopyridine. III. Hydrolysis of diacetyl-a-aminopiperidine and the ψ -dipiperideine of Ahrens, A., II, 302.

and Novikova, A. F., hydrocarbons and sulphur compounds of lubricating oils. I. Selectivo extraction of Tschusov petroleum with aniline. II. Separation of sulphur compounds of Tschusov petroleum as mercurie complexes, B., 12, 316.

and Poljakova, I. M., mechanism of amination by means of sodamide. II. Preparation of unsubstituted aromatic amidines by the action of sod-

amide on nitriles, A., II, 100. and Tscherkassov, V. P., oxidation-reduction indicators. II. Diphenylaminedicarboxylic acids, A., I, 43.

See also Tschitschibabin, A. E. Kirsanova, V. A., optimal p_H of invertase of different strains of Aspergillus niger, A., III, 142. Influence of neutralisation of fermenting media on acid formation by Aspergillus niger, A., III, 143. Colorimetric determination of caroteno, A., III,

See also Ivanov, N. N.

Kirsch, W., and Gramatzki, F., influence of acidified silage on metabolism of sheep and pigs, with special reference to the use of sulphuric acid for acidification, B., 1404.

Kirschbaum, E., phenomena occurring in a vertical evaporating tube, B., 1286.

and Andrews, C. A., efficiency of rectification column plates, B., 196.

Kirschbraun, L., and Patent & Licensing Corp., bituminous road mixtures, (P.), B., 787. Bituminous emulsions, (P.), B., 1301.

Kirschman, H. D., and Crowell, W. R., reaction between osmium tetroxide and hydrobromie acid. II. Rate study, A., I, 142.

Kirschnick, B. See Meerwein, H. Kirschstein, B., burning of electrodes in the arc light in a mixture of air and oxygen,

B., 1073.

Kirsh, D., lipase production by Penicillium oxalicum and Aspergillus flavus, A., III,

Kirst, E., nature and action of fireproofing agents [for wood], with special reference to mining, B., 141.

Kirst, H., powder-dip enamelling, B., 547.

Kirst, IV., dyeing of wool + viscose-rayon staple fibre mixture materials with naphthol AS dyes, B., 1195.

Kirst, W. E. See Du Pont de Nemours & Co., E. I.

Kisch, B., amino-acid deamidases of the animal body, A., III, 139.

Kiselev, A. A., numeration of X-ray diagrams in mass photography, A., I, 330. X-Ray examination of thin welded joints, B., 355.

Kiselev, A. V., structure of silicic acid gels, A., I, 183.

Kiseleva, N. See Pakschver, A.

Kiseleva, V. E., determination of water in soot, B., 1153.

Kiselgof, L.A. See Menkovski, M.A. Kiselgov, P., rôle of carriers in hetero-

geneous catalysis, A., I, 37.

Kishen, J., laws of distribution of velocities of particles undergoing emission and absorption in a radiation field, A., I, 163.

Kishi, N., and Ando, M., constituents of Fushun shale oil. I.—IV., B., 1003. Pressure hydrogenation of Fushun crude shale oil. II., B., 1297.

Ando, M., and Ezaki, I., pressure hydrogenation of Fushun crudo shale oil.

ľ., B., 1297.

Kishimoto, H. See Murakami, T. Kishlar, L., nutritive developments in soya-bean products, B., 1265.

Kisilbasc, B. B. See Shan, H. C.

Kiss, A. von, and Gerendás, M., optical absorption of cobalt chloride solutions, A., I, 613.

Lajtai, I., and Thury, G., solubility of gases in mixtures of water and nonelectrolytes, A., I, 509.

Kiss, S. A. *Sec Standard-I. G. Co. Kisser, J., and Kondo, Y., microehemical detection of di- and tri-hydric phenols by drop reactions, A., II, 314.

and Lohwag, K., histo-chemical investigations of lignified cell-walls, A., III,

Kisskalt, K., and Ilzhöfer, H., purification of fish-pond [or tank] water, B., 625.

Kistiakowsky, G. B., investigations of molecular structure of organic compounds, A., I, 223.

and Rosenberg, S. L., thermal decomposition of gaseous hydrogen peroxide, A., I, 190. and Smith, W. R., kinetics of thermal

cis-trans isomerisation. VI., A., I, 86. and Solomon, A. K., ultra-violet absorp-

tion spectrum of benzene, A., I, 494. and Stauffer, C. H., kinetics of gaseous addition of halogen acids to isobutene, A., I, 141.

See also Harkness, J. B.

Kiszely, G., vital staining by use of solutions in serum-albumin, A., III, 162. Kita, G., catalyst for production of syn-

thetic gasoline, B., 1005.

Kobinata, S., and Ishikawa, H., viscose. LXXIII. Spinning of viscose treated with casein and soap, B., 1320.

Monden, S., and Ishikawa, H., viscose. LXVII. Influence of temperature and duration of soaking on viscosity of viscose, B., 124.

Monden, S., Kobinata, S., and Ishikawa, H., viscose. LXIX. Lowering the vis-

cosity of viscose, B., 226.

Suehiro, S., Imamura, S., and Yama-guchi, M., viscose. LXVIII. Influence of temperature on ripening of viscose; experiments with viscose prepared from alkali-cellulose aged at room temperature or above, B., 124.

Suehiro, S., Kobinata, S., and Ishikawa, H., viscose. LXX. Action of sodium hydrosulphide on cellulose, B., 226.

Kitagawa, \hat{M} ., diamino-acid, canavanine. V. Synthesis of canaline, A., II, 89. Diamino-acid, canavanine, and monoamino-acid, canaline, A., II, 402.

and Fnjii, Minoru, crystalline urease. I., A., III, 354.

and Tsukamoto, J., canavanine. VIII.,

A., II, 402.

Kitagawa, T., formation of activated water molecules in high vibrational states in the oxy-hydrogen flame, A., I, 91. Relationship between the magnetic moment of a metal atom and its catalytic activity, A., I, 572.

Kitahara, K. See Katagiri, H. Kitaigorodski, A., structure of glycine, A., I, 118.

Kitajima, S. See Wada, I. Kitano, T., taka-amylase. XIV. Selectivity of adsorbents; polyaluminium hydroxide B. XV. Selective adsorption of takadiastase solutions purified adsorption. XVI. Summary. X Maltase-free taka-amylase. XVIII. Product of saccharification, limit of decomposition, and reaction velocity coefficient of the decomposition of starch by takaamylase, XIX. Saccharification of starch by takadiastase, A., III, 96, 221.

Kitasato, T., xylyl-β-d-glucoside, A., II, 87.

See also Ariyama, N.

Kitasato, Z., and Shishida, H., constitution and synthesis of domesticine methyl ether (d-epidicentrine), A., II, 127. Constitution of domesticine, A., II, 355. Constitution of acid sapogenins. XIII. Hederagenin and oleanolic acid, A., II,

Kitaura, S., Kolbe electrosynthesis of several organic acids, A., II, 440.

Kitazato, S. See Matsui, M. Kitchen, H. See Haworth, W. N.

Kitchen, N. H., applications of metal spraying in dyeing and textile industries, B., 130.

Kitching, A. F., titration of carbonates, A., I, 579.

Kittel, H., investigation by emanation method of changes in mixtures of oxides during transition to compounds, A., I, 74.

Kittol, W. See Schneider, G.

Kittle, R. L. See Bataafsche Petroleum Maats., and Shell Development Co.

Kittredge, H. G., Turner, A. J., and Kay & Ess Chem. Corp., air-drying imitation leather finish, (P.), B., 472.

Kiu, T., photographic plates sensitised by sodium salicylate, B., 188.

Kiyoura, R. See Matsui, M.

Kizel, A., and Konovalov, S., amino-acid composition of proteins from two edible mushrooms, A., III, 245.

and Opaljar, K., chemical changes in protein during thermal denaturation, A., III, 245.

and Psehenova, K., structure of proteins. IV. Benzoylated protein, A., III, 245. Kizelschtein, V. J., preparation of polished

surfaces for metallographic analysis, A.,

Kjär, A., variations in daily course of assimilation intensity of leaves of Sinapis alba in relation to internal factors, A., III, 501.

Kjörstad, E. A. H., preservation of food materials and particularly of fresh fish, (P.), B., 186.

Klaassens, K. H. See Houwink, R. Klabina, T. I. See Dintzes, A. I.

Klärding, J., scientific basis of tin smelting, B., 570. Behaviour of iron ores during reduction, B., 1058. Significance of physico-chemical equilibrium investigations in reduction of minerals, B.,

Klages, F., and Niemann, R., attempts to synthesise sucrose, A., II, 230.

Klages, F. E. P., and Powers Regulator Co., apparatus for controlling moisture content of [sheet] material, (P.), B., 629. Klaiber, H. See Raub, E. Klami, A. See Komppa, G.

Klanfer, K., and Luft, A., detection of oxalic acid in leather, B., 1247.

Klaphake, W., condensation of water from the atmosphere, B., 193.

Klapproth, W., coating of pure and alloyed light metals with a firmly adhering protection against corrosion, (P.), B., 935.

Klar, R., adsorption of ethane, ethylene, acctylene, and hydrogen and polymerisation and hydrogenation of ethylene and acetylene by carbon, carbon contacts, and active iron, A., I, 408.

Klasens, H. A., and Terpstra, P., crystallography of cupric saccharinate, A., I, 401.

Klassen, C. W. See Weart, J. G.

Klatt, W., behaviour of organic nitrogen and sulphur compounds in anhydrous hydrogen fluoride, A., I, 464. Apparatus for the determination of the elevation of the b.p. in hydrogen fluoride, A., I, 534. Solubilities of hydrocarbons in anhydrous hydrogen fluoride and their modification by added salts, A., I, 610.

Klauder, J. V., and Brown, H., sulphur

content of hair and nails in abnormal

states. II. Nails, A., III, 167. Klauditz, W. See Schütz, F. Klausting, E. A., fusion control of metals for flakes, B., 1217. Klawans, A. H. See Barnes, B. O.

Klebanski, A. L., and Rachlina, M., determination of unsaturation of chloroprene polymerides. II., A., II, 363. and Tschevitschalova, K. K., synthesis

of derivatives from ay-dichloro-Δβ. butene; use of by-products from synthesis of chloroprene, A., II, 224. Tschevitschalova, K. K., and Belenkaja,

A. P., elimination of hydrogen chloride from $\beta\delta$ -dichloro- Δ^{β} -butene. II., A., II, 81.

Kleber, W. See Kolbach, P.

Kleczkowski, A., dyeing of linen by Congored, B., 537.

Kleef, G. van. See Clay, J.

Kleen, W., and Rothe, H., space-charge equation for electrons with initial velocity. II., A., I, 209.

Kleiber, M., Goss, H., and Guilbert, H. R., phosphorus deficiency metabolism and food utilisation in beef heifers, A., III,

and Saunders, F. J., metabolism of anæsthetised rats, A., III, 302. Klein, A. See Biddle, S. B.

Klein, A. A., properties of fused alumina grain [abrasive], B., 1341.

Klein, C. H. See Schumb, W. C.

Klein, D. X. See Du Pont de Nemours & Co., E. I.

Klein, F., mixed phenol-formaldehyderubber resins, B., 588.

Klein, G., Kaminski, N., and Junitschman, P., factory control of fat saponification, B., 584. Making hydrogen by contact methods, B., 906.

Klein, Gustav, disposition towards cancer: its diagnosis and prevention, A., III, 58.

Klein, H. See I. G. Farbenind. Klein, H. C. See Hoover, J. R.

Klein, J. See Dolejsěk, V. Klein, K., purification of mercury, A., I, 257.

Klein, L. F. See Nungester, W. J. Klein, M., modifications of the vaginal epithelium in rodents, A., III, 402.

and Parkes, A. S., progesterone-like action of testosterone and certain related compounds, A., III, 151.

Klein, Otto, and Spiegel, E., effect of intraarterial injection of substances which injure the capillaries on internal gaseous metabolism and oxygen utilisation, A.,

Klein, Otto (Erlangen), and Lange, E., normal Volta potential $\Delta\psi_0$ of the most important electrochemical two-phase systems, especially of metal-metal salt solution electrodes, A., I, 520.

Klein, O. C., improved method for igniting thermite reactions, A., I, 527.

Klein, P., development of the rubber industry, B., 591.

Klein, P. (Breslau). See Voss, W. Klein, S. See Volmar, Y. Klein, W., nutritional problems of domestic animals, A., III, 466.

[with Gaber, E., and Förster, M.], spectrography of serum ultrafiltrates, A., III, 249.

Klein, Schanzlin & Becker, Akt.-Ges. See Ungefehr, E.

Kleinau, W. See Brunner, O. Kleinberg, W. See Gordon, A. S.

Kleiner, I. S., and Tauber, H., vitamin-C requirement of mice, and its biological formation, A., III, 77.

Weisman, A. I., and Mishkind, D. I., similarity of action of male hormones and adrenal extracts on the female bitterling, A., Ill, 151. Similarity of action of purified cortical adrenal extracts to crystalline androsterone and testosterone, A., III, 436.

See also Tauber, H., and Weisman, A. I.

Kleinert, H. See Geissler, W.

Kleinert, R., influence of water vapour on readily fusible metals and alloys and the effect of temperature, B., 572.

Kleinert Rubber Co., I. B. See Guinzburg,

Kleinschmidt, R. V. See Du Pont de Nemours & Co., E. I.

Kleis, J. D., ferromagnetic anisotropy at various temperatures of nickel-iron crystals, A., I, 120.

Klemene, A., active hydrogen, oxygen, and nitrogen at pressures up to 20 mm.,

A., I, 526.

and Eder, R., electrolysis in the glow discharge. VI. Behaviour of chloric and perchloric acids and their alkali salts, A., I, 419.

Hintenberger, H_{\cdot} , and Höfer, H_{\cdot} , mechanism of discharge in the Siemens ozone tube, A., I, 273, 486.

and Neumann, Walter, formation of a higher nitrogen oxide (NO₃) in action of the glow discharge on the gaseous system NO₂-O₂, A., I, 316. Determination of nitrogen peroxide-nitric oxide mixtures by exact gas-analysis methods, A., I, 374.

and Wagner, G., pentacarbon dioxide; OCCCCCCC, A., I, 575.

Klement, R., [carbonate content of inorganic bone material and its synthesis], A., III, 167.

Klementiev, V. A., hydration of magnesium oxide, B., 132.

See also Bergman, A. G., and Golovski, M. P.

Klemm, L., magnetochemical investigations. XXV. Molecular magnitude of hyposulphurous acid, A., I, 229.

Klemm, M., badan (Bergenia crassifolia): possibility of its cultivation, B., 1388.

Klemm, W., newer problems in inorganic chemistry, A., I, 574.

Klemm, W., and Bommer, H., rare-earth metals, A., I, 257.

and Frischmuth, G., magnetochemical investigations. XXIII. Rhenium compounds, A., 1, 174. Ammoniates of rhenium trihalides, A., I, 195. Complex rhenium oxycyanide, A., I, 195.

and Koczy, A., selenides of the rare earths, A., I, 421.

See also Goubeau, J., Gruner, E., and Harmebohn, O.

Klemme, D., and Poe, C. F., determination of reducing sugars in bacterial cultures; eolorimetric methods, A., III, 227.

Klemperer, F. See Barron, E. S. G. Klempner, E. See Frank, R. T. Klemt, G., and Altermann, W., proteolytic activity of wheat flours, B., 721.

Klenck, E., and Dittmer, J., phosphatides. XIII. Highly unsaturated fatty acids of the glycerophosphatides of various organs, A., III, 56.

Klenk, W., mixing machinery for dry pigments, B., 1237.

Klepper, E. A., prune beer, (P.), B., 720. Klerks, J. V. See Radsma, W.

Klesper, R., firing of refractory bricks, B., 550, 782.

Klevke, E. A. See Karshavin, V. A. Klevke, V. A., preparation of ammonium sulphonitrate from gypsum, carbon dioxide, ammonia, and nitric acid, B., 339. Platinum-rhodium and platinum catalysts for oxidation of ammonia, prepared by cathodic sputtering, B., 902.

See also Jatsuta, N. A. Kley, W. See Hahn, G.

Kliefoth, M. H., and Burgess Labs., C. F., rubber dispersion in alkali silicates, (P.), B., 161. Material for absorbing sound, (P.), B., 635.

Kliewe, H., and Herwig, H., bacteriological investigations on milk-separator slime,

B., 387.

Kligler, I.J., and Bernkopf, H., inactivation of vaccinia virus by ascorbic acid and glutathione, A., III, 318.

Klimmer, M., and Weiske, G., culture of mastitis streptococci from milk. I., II.,

and IV., A., III, 398; B., 489, 1121. Klimovskaja, M. F. See Ermuzevitsch,

D. V. Klinc, L., microchemical determination of butyric acid, A., II, 477.

Kline, E., and Du Pont Rayon Co., [lowlustre] rayon, (P.), B., 1193.

Kline, G. M., permeability to moisture of synthetic resin finishes for aircraft, B., 466.

and Axilrod, B. M., testing plastics, B., 60. Kline, O. L., Bird, H. R., Elvehjem, C. A., and Hart, E. B., improved synthetic ration for vitamin- B_1 studies, A., III, 281. Distribution of vitamin- B_i in some plant and animal products, A., III, 405.

See also Arnold, A., and Bird, H. R. Klinefelter, T. A. See Meyer, W. W.

Kling, A., and Lassienr, A., conductivity measurements and pH measurements, A., I, 551.

and Lecordier, G., influence of two war vesicants and their products of hydrolysis on interfacial tensions of lipins with respect to physiological serum, A., III, 134.

Kling, K., and Wicclawek, B., mineral gas. V. Determination of low-b.p. hydrocarbons in liquefied gas, B., 517.

Kling, M., and Engels, O., determination of nutrient content and fertiliser requirement of soils, with consideration of plant species and general growth conditions, B., 270.

Kling, W. See Reumuth, H. Klinger, J. See Loria, S. Klinger, P., and Koch, Walter, rapid determination of silicon in iron and in plain and alloy steels by means of photometry, B., 563. Microchemical determination of nitrogen in steel, with especial reference to the examination of the surface, B., 1214.

Klinghoffer, K. A., distribution of glucose between blood cells and serum, A., III,

Klingsöhr, H., German artificial fibres. III. Properties of artificial textile fibres prepared in different ways, of different cross-section and different fibre-length,

in carded yarn, B., 534.

Klinkenberg, L. J., inorganic complex compounds of boron tri-fluoride, A., I, 120. Crystal structure of NaOH, BF3 and of the alkali borofluorides and TIBF4, A., I, 171. Constitution of nitrosyl compounds; crystal structure of nitrosyl perchlorate and nitrosyl borofluoride, A., I, 501. Isomorphism and supersaturation, A., I, 553.

Klinkenstein, G., uses of lacquers in the

metal industries, B., 699.

Klinov, I.J., and Andreeva, V. V., chemical stability of Soviet metals and alloys to action of damp sulphur dioxide, B.,

and Arnold, T. I., determination of small amounts of aluminium in presence of aluminium oxide, A., I, 149.

Klipstein, K. H., Ticknor, A. A., and Calco Chem. Co., purification of alcohols, (P.), B., 1024.

Klipstein Chemical Processes, Inc. See

Jacobson, B. H.

Kliukvin, N. A., and Kliukvina, S. S.,
preparation of acetylene from methane,
B., 106.

Polozov, V. F., and Feofilov, E. E., hydrogenating the neutral kerosene fraction of tar from Gdov bituminous shale, B., 10.

Kliukvina, S. S. See Kliukvin, N. A. Kliutschevitsch, A., and Vischnevskaja, A., rapid determination of iodine value by Hūbl's method, B., 366.

Kliutschnikova, M. I., physiological characteristics of yarovised and non-yarovised Perilla, B., 601.

Kljatschko, I. R., microcoulombmetry and unimolecular oxide films; theory of adsorptional centres, A., I, 84. Adsorption of alkalis by cellulose at different temperatures as method of analysing the boundary between cellulose and solution, A., I, 178. Disperse hysteretic differential wetting; kinetics of removal of adsorbed films as method of investigating chemical reactions in the surface layer, A., I, 179. [Use of] shale oil soap and tar in the textile industry and in flotation, B., 58.

Kljatschko, J. A., chemical properties of metallic compounds. III. Aluminium-silicon solutions, A., I, 297. Determination of gas content of aluminium alloys by high-temperature vacuum extraction, B., 450. Determination of alumina in aluminium, B., 576. Preparation of aluminium powder, B., 687. Kljatschko, M. Z., refining of castor oil, B., 1080.

Kljatschko-Gurvitsch, L. L., electrolytic preparation of copper oxide and salts by the permeable diaphragm method, A., I, 369.

Kljutschkin, N. See Schettle, I.

Klodt, W., relations between l-ascorbic acid and intermediary gas metabolism, A., III, 326. Effect of ascorbic acid on oxygen dissociation of blood and on biological oxidation, A., III, 326

Klönne, M., and Hartmann, Karl, upright chamber furnaces, (P.), B., 629.

zer, F., X-ray investigations of additive compounds of cholesterol, A., II, 416.

See also Féher, F.

Klonnek, F. See Sauter, V. Klopstock, F., and Vercellone, A., antigenie nature of the polysaccharides of tubercle bacillus, A., III, 414.

Klosky, S., and Amer. Agricultural Chem. Co., calcium arsenate insecticides, (P.), B., 274.

Lorenz, K. H., and Corey, W., determination of neutralising value of monocalcium phosphate, B., 1334.

Klotschko, M. A., conductance of electrolytic systems, A., I, 309. Study of nonaqueous solutions by methods of physicochemical analysis, A., I, 356, 607. Salt reserves of Lako Elton, and their utilisation, B., 902.

Kloz, G., [test-paper] aid for rapidly determining degree of acidity or $p_{\rm H}$ value of liquids, (P.), B., 307.

Klüber, H. von, aluminium for production of highly reflecting surfaces, B., 687.

Kluge, H., detection and determination of glycerol in marzipan and persipan, B.,

Kluge, H. D. See Schmidt, F. C.

Kluge, W., and Uhlmann, W., effect of light and heavy hydrogen on selectivo photo-effect with alkali metals, A., I, 64. Klugh, B. G., and Swann Fertilizer Co.,

chemical salts, (P.), B., 342.

Klughardt, A., measurement of [paper] gloss with photo-[electric] cells, B., 27. Kluin, G., refractometric determination of fat in oil-containing materials (groundnuts, rape seed, palm kernels, and coconut), B., 1234.

Kluyver, A. J., and Schnellen, C., fermentation of rhamnose, A., III, 434.

Kminek, M., movement of oxalogenic substances in [beet-sugar] manufacture, B., 484. Oxalic acid-forming substances in the beet, B., 716. See also Vondrák, J.

Knaack, F. E. See Zimmerman, A. C. Knabner, O., drying of coal, B., 101. Development of flue gas dedusting plant, B., 855.

Knaggs, J. See Portals, Ltd.

Knallinsky, A. See Gatti, C. Knandel, H. C. See Murphy, R. R.

Knapen, A., building blocks, bricks, etc., (P.), B., 42.

Knapp, A., blood-sugar content of arterial and venous blood, A., III, 3.

Knapp, A. W., injurious insects in cacao warehouses, B., 183. Cacao shell, B.,

and Churchman, A., cacao shell and its use as an accessory fodder, B., 183.

Knapp, B. B., and Walton, J. H., oxidation of chromous to chromic sulphate, A., I, 469.

Knapp, F., can powdered glass be used in the ceramic industry? B., 547.

Knapp, I. E., determination of unsaponifiable matter in rosin, B., 1084. See also Logan, W. B.

Knapp, O., glasses of special composition, B., 439. Constitution of silicate glasses on the Biltz-Weibke hypothesis, B., 546. Boric acid glasses, B., 1204. Egyptian " nummi vitrei," B., 1339.

Knapp, S. M. See Rysselberghe, P. van. Knapp, W., new ring systems. III. Phenyl-1:2-methoxynaphthylamine o-8ketone, A., II, 306.

Knauer, F. See Harteck, P.

Knauss, C. A., printing ink driers, B., 810. Knaust, H., influence of conveying and loading devices on coal degradation, and preventive measures therefor, B., 743.

Knaysi, G., and Dutky, S. R., growth of a butanol Clostridium in relation to oxidation-reduction potential and oxygen content of the medium, A., III, 224.

Knecht, A. A., filters, (P.), B., 304. Filters for gaseous media, (P.), B., 307. Gas filter, (P.), B., 741. Knepper, W. See Schenck, R.

Kniaginitschev, M. I., varietal differences of wheats with reference to ash content of grain and flour, B., 608.

Knibbs, N. V. S., design and operation of modern lime works. I.—III., V.— VI., B., 539, 1043. Chemical reactions and compounds of lime, B., 1043.

and Pehrson, A. P., artificial stone, (P.), B., 41. Utilisation of colliery shale and other waste bituminous shales, (P.), B., 519.

Knickerbocker, R. G., and Koster, J., electrometallurgical studies on treatment of alunite, B., 52.

Kniga, A., micro-reaction for potassium, A., I, 326.

Knigge, G., determination of fatty acids in tylose soaps, B., 585.

Knight, A.H. See Imperial Chem. Industries. Knight, B. C. J. G., essential growth factor for Staphylococcus aureus, A., III, 145. Nicotinic acid and the growth of Staphylococcus aureus, A., III, 227. Nutrition of Staphylococcus aureus; nicotinic acid and vitamin- B_1 ; activities of nicotinamide, ancurin (vitamin- B_1), and related compounds, A., III, 275, 317.

See also Kögl, F.

Knight, E. C. See Bond, C. R., and Johnson, E. M.

Knight, E. W. See Scofield, C. S.

Knight, J., upper air, A., I, 101. Knight, O. A., and Benner, J. R., com.

parison of corrosion-resistance of wrought irons made by different processes, B., 44. Knight, O. D., and Puetz, H. H., sediment

tester, (P.), B., 634.

Kniphorst, L. C. E., and Kruisheer, C. C., determination of $\beta\gamma$ -butylene glycol, acetylmethylearbinol, and diacetyl in wine and other fermentation products. I. Methods, B., 486.

Knipp, E., wear of ferrous alloys by minerals, B., 563.

Knippenberg, E. See Alten, F. Kniskern, W. H., Lawrence, C. K., and Atmospheric Nitrogen Corp., composition for use in preparation of fertilisers, (P.), B., 715.

Rohner, L. V., and Atmospheric Nitrogen Corp., fertilisers and compositions, (P.), B., 482.

Knoblauch, H. C. See Odland, T. E. Knoblieh, G., purification of starch milk and manufacture of potato starch, B., 276.

Knoefel, P. K., strychnine and chronaxie, A., III, 267.

Knöll, H. See Jander, G. Knoke, S., determination of moisture in solid substances by measurement of their dielectric constants, A., I, 578. Polarographic determination of zinc oxide in lithopones, B., 1237. Knol, K. S. See Veldkamp, J.

Knoll, M., and Schröter, F., electron image and figure transmission with insulating and semi-conducting films, A., I, 338. Knoll, W. V., gelatin and glue extractor,

(P.), B., 69. Knoop, F. See Martius, C.

Knoop, H. See Schlubach, H. H.

Knoops, F., electric heating in the lightmetal industry, B., 1356.

Knorr, C. A. See Fischer, M.

Knorr, H. V., and Albers, V. M., recording microphotometer, A., I, 427. Fluorescence of the chlorophyll series: fluorescence and photodecomposition of solutions of chlorophyll-a under oxygen, carbon dioxide, and nitrogen, A., I, 549.

Knorr, M., and Lippert, $(Fr\bar{l}.)$, efficiency of egg preservatives for infected eggs, B., 80. Knott, E. M., utilisation and retention of vitamin-B by young children, A., III,

See also Daniels, A.L., and Schultz, F.W.Knott, J. C., Murer, H. K., and Hodgson, R. E., determination of apparent digestibility of green and cured grass by modified procedures, A., III, 61. See also Hodgson, R. E.

Knott, J. E., fertilising onions in muck

soils, B., 72.

Knott, L. See Deuel, H. J., jun. Knowles, E. C. See Cloke, J. B., and Texas Co.

Knowles, H. B. See Lundell, G. E. F.Knowles, N. R., acid production and protein degradation of some acid-proteolytic

cocci, Ä., III, 36.

Knowlton, J. W. See Rossini, F. D. Knox, A. S., chlorine content of the Leda clay [from Waterville, Maine], A., I, 156.

Knox, W. H., jun., and Victor Chem. Works, calcium phosphates, (P.), B., 667. Knuth, E. See Christiansen, J. A.

Ko, F. M. See Ts'ao, Y. Y

Kobayashi, K., Yamamoto, Kenichi, Hinonisi, S., and Yamamoto, I., synthesis of liquid hydrocarbons from natural gas. V. Formation of acetylene by pyrolysis of methane in the arc discharge, B., 1005. Kobayashi, M. See Kashimoto, S., and

Tsuchida, R.

Kobayashi, R., knock rating. V. Relationship between molecular structure and antiknock characteristics of paraffin hydrocarbons, B., 752. VI. Relationship between instability product and antiknock characteristics of olefine hydrocarbons. VII. Instability product and octane number of aliphatic hydrocarbons. VIII. Instability product of chain hydrocarbons, B., 752, 1006, 1298.

and Kajimoto, S., knock rating. [Lead tetra]ethyl effects of alcohol fuel and benzene fuel. III. [Lead tetra]ethyl effects of pure hydrocarbons. IV. Effects of [lead tetra]ethyl on cracked petrols, B., 11, 109.

See also Tanaka, Y.

Kobe, K. A., and Doumani, T. F., reactions between solids and solutions. Calcium phosphate and sodium carbonate, A., I, 372.

Wilson, Hewitt, and Sheehy, T. M., evaporation by submerged combustion. Dewatering clay suspensions, B., 1340.

See also Leitz, C. F.

Kobeko, P. P., Kuvshinski, E. V., Gorodezkaja, F. A., Bachaev, I. P., and Shitnikov, S. G., amorphous state. IX. Electrical conductivity and viscosity of alcohols, A., I, 284.

Kuvshinski, E. V., and Schischkin, N. J., amorphous state. X. Conductivity of strong electrolytes in the amorphous

state, A., I, 284.

Kobel, M. See Neuberg, C.

Kobilskaja, M. V. See Moldavski, B. L. Kobinata, S. See Kita, G., and Suehiro, S. Koblianski, G. G., Lifschitz, I. A., Christiansen, L. C., and Rakitianski, I. V., composition of low-boiling fractions of rectified butadiene from synthetic rubber plants: retardation at the beginning of polymerisation of butadiene in presence of metallic sodium, B., 373.

Koblice, J., corrosion of metals and alloys, B., 1355. Damaging influence of waters which corrode metals, B., 1414.

Koblitsky, L. See Fleming, W. E. Koblitz, W., Meissner, H., and Schumacher, H. J., photochemical oxidation, sensitised by bromine, of carbon tetra-bromide to carbonyl bromide and bromine in solution in carbon tetra-

chloride, A., II, 269. and Schumacher, H. J., oxidation of rubrene in light, A., I, 255.

Kobljanski, A. G., partition coefficients of certain amines in the two-phase systems: water-ethyl alcohol-potassium carbonate and -ammonium sulphate, A., I, 24. Application of the two-phase systems water-ethyl alcohol-salt to extraction of

Kobimüller, L. O., change of form of bacteria under influence of lithium chlor-

ide, A., III, 435.

Kobolb, O. See Verein. Aluminium-Werke

Kobosev, N. I., and Monblanova, V. V., activating effect of poisons in electrocatalysis, A., I, 36.
See also Besalov, P., Bloch, O., and

Eremln, E. N.

Kobrin, S. M., rôle of active acidity in enzymic inversion of sucrose, A., I, 368. Koch, A., new German synthetic rubber-

Buna, B., 160. See also Bereczky, A.

Koch, B., evaporation of boiler salts, B.,

Koch, E., and Wagner, C., formation of Ag2HgI4 by reaction between solid merouric and silver iodides, A., I, 88.

Koch, E. A. J. See Farrer, J. O. Koch, E. M., and Koch, F. C., provitamin-D potency of sterol derivatives, A., III, 79.

Koch, F., and Rieder, F., nuclear γ-radiation of beryllium, A., I, 161.

Koch, F. C. See Gallagher, T. F., Koch, E. M., and Peterson, D. H.

Koch, H., properties of synthetic Iubricating oils from kogasin, B., 408.

Koch, H. E., new [resistance] alloy for electric heat application [in high-temperature furnaces], B., 693. [Smith] alloy 10, B., 921.

Koch, Jeno. See Hunyadi, L. V. Koch, Jorgen. See Frisch, O. R. Koch, J. R. See Orthmann, A. C.

Koch, K. (Darmstadt). See Schöpf, C. Koch, K. (Halle), preparation of ointments

and pastes, B., 1130.

Koch, P., rapid determination of alumina by the hydroxyquinoline method, B.,

Koch, P. A., and Rückert, H., refractive index of artificial silks, B., 534. See also Herzog, A.

Koch, R., living dried yeast from bottomfermentation beer yeast, B., 1394. Seo also Stockhausen, F.

Koch, S., quasi-stationary field distribution in large Barkhausen discontinuities, and their indication by the ordinary Bark-

hausen effect, A., I, 402. Koch, Walter. See Klinger, P. Koch, Willi. See Mannich, C.

Koch, William, properties and uses of ethylcellulose, B., 893.

See also Hercules Powder Co. Koch, W. F., oxidising or reducing agents

or combined oxidising and reducing agents intended for promoting metabolic changes in living organisms, (P.), B., 620. Koch, W. R., spectrographic determination

of magnesium in aluminium alloys, B., 686.

Kochakian, C. D., excretion of male hormones. I., A., III, 402. and Murlin, J. R., relationship of the

synthetic male hormone, androstenedione, to protein and energy metabolism of castrate dogs, and protein metabolism of a normal dog, A., III,

Kochańska, L. See Bobrański, B. Kochergin, A. E. See Gortikov, V. M. Kocholaty, W. See Weil, L. Kochor, S. J., determination of barium,

sulphur, and sulphates; rapid and accurate volumetric method, A., I, 476. Kochova, K. See Zautschenko, P

Kochs, A., effect of type of emulsion on photographic intermittence effect, B., 844.

Kock, F. C. See Marlow, H. W. Kockel, B., some multiple processes between electrons, positrons, and light

quanta, A., I, 595.
Kočnar, M. See Křepelka, J. H.

Kocsis, E. A., and Gelei, G., detection of mercurous, mercuric, and silver ions by drop reactions, A., I, 328.

and Nagy, Z. von S., chromotropic acid as indicator in fluorescence titrations, A., I, 323.

Kocwa, A., rearrangement of pyrazolones and of their derivatives. I.—III., A., II, 212, 214.

Koczor, F., examination of flour employed in Hungary, B., 1118.

Koczy, A. See Klemm, W.

Kodak, Ltd., hydroquinones [quinols], (P.), B., 22. Intermediates for [photographic sensitising] dyes, (P.), B., 880. Purification of monomethyl-p-aminophenol, (P.), B., 1314. Photographic films, (P.), B., 1409.

and Babcock, G. S., photographic sensitive films, (P.), B., 1409.

and Beilenson, B., [basic] dyes [photographic sensitisers], (P.), B., 1138.

Crabtree, J. I., and Russell, H. D., photographic acid hardening-fixing compositions, (P.), B., 295.

Kodak, Ltd., and Crowther, R. E., colour photography, (P.), B., 1410.

Fisher, N. I., and Hamer, (Miss) F. M., cyanine and related dyes, (P.), B.,

and Gayford, T. S., welding and weld rods therefor, (P.), B., 1362.

and Hickman, K. C. D., electrolytic deposition of metals [from fixing baths], (P.), B., 1361.
and Jelley, E. E., photographic develop-

ing solutions for colour photography,

(P.), B., 845. Lane, G. T., and Butterfield, W., cylinder papermaking machines, (P.), B., 1194. and Malm, C. J., high-viscosity organic

esters of cellulose, (P.), B., 895. Sheppard, S. E., and Houck, R. C., hardening gelatin, especially in photographic emulsions, (P.), B., 623. and Ward, E. J., sensitive photographic

elements, (P.), B., 1409.

Young, A. A., and Slack, A. D., sensitive

photographic elements, (P.), B., 1410. Kodama, K., refined pulp from straw of graminaceous plants, (P.), B., 29.

Kodolányi, V. R., potassium iodide-starch paper test [for nitroglycerin], B., 732.

Kobenhavns Møllestens Fabrik og Mølle-byggeri F. Jensen's Enke N. Nielsen & Co., A./S., grinding or crushing mills, (P.), B., 510.

Koechlin, A. See Zehnlé, P. Koechlin, E., obtaining printed effects on fabrics without using printing or steaming apparatus, B., 30.

Kögel, G., history of development of diazoprinting process, B., 1275. Sound records, (P.), B., 700.

Kögl, F., active principles in plant growth, A., III, 367.

Fildes, P., Lwov, A., Knight, B. C. J. G., Richardson, G. M., Sinclair, H. M., and Tincker, M. A. H., growth factors, A., III. 444.

and Fries, N., plant growth-substances. XXVI. Effect of biotin, aneurin, and mesoinositol on the growth of fungi, A., III, 502.

and Haagen-Smit, A. J. [with Tönnis, B., Hasselt, W. van, and Pons, L.], plant growth-substances. XXIII. Biotin and ancurin as phytohormones; physiology of germination, A., III, 49.

Koningsberger, C., and Erxleben, H., growth-substances. XXIV. Auto-inactivation of auxin-a and -b, A., III, 49.

Koehl, S. M., and Wenzke, H. H., dielectric properties of acetylenic compounds. VIII. Propiolyl chlorides and other acid chlorides, A., I, 498.

Koehler, B., seed treatments for control of certain diseases of wheat, barley, and oats, B., 167.

Köhler, F. See Kuhn, R.

Köhler, L. See Kuhn, R. Köhler, W. See Steinkopf, W.

Koehler Manufacturing Co., [separator for] storage batteries, (P.), B., 461.

Koehn, A. See Weigmann, F. Koehn, C. J., jun., and Elvehjem, C. A., concentration of the anti-pellagra factor, A., III, 281.

Köhn, M., and Mainzhausen, L., influence of light on the rhythmic precipitation of silver chromate in gelatin, A., I, 471.

Koehring, V. See Prytherch, H. F. Kölbl, W. See Pauli, W. Koene, C. P. See Sizoo, G. J.

Koenig, C. J., use of syenites in semi-vitreous ware. II. Plant trials, B.,

König, E., testing and assessing benzol wash oils, B., 864.

Koenig, E. W., analysis of felspar; determination of ferric oxide. I. and II., A., I, 425.

Koenig, F. O., thermodynamics of the electric field with special reference to chemical equilibrium, A., I, 464.

König, H., limits of performance of selenium barrier-layer cells, A., I, 201.

Koenig, J. H. See Gen. Electric Co. Koenig, W., determination of fat in cream by the Weka process, B., 612.

Koenig, W.J., and Pohl, R.H., compositions [for linoleum, etc.], (P.), B., 1376. Compositions for varnishes, etc., (P.), B., 1376.

Koenigs, E., Bueren, H., and Jung, G., 3:4-pyridopyrazine and a pyridylbenzotriazole, A., II, 78.

Königstein, R., and Willheim, R., relationship between autolysis and carcinolysis, A., III, 418.

Koenitzer, L. H., elastic and thermal expansion properties of concrete as affected by similar properties of the aggregate, B., 555.

Koepernik, K. H. See Nehlep, G. Koepf, G. F., and Mezen, J. F., uterus-stimulating, depressor, and bladdercontracting activities in extracts of rat's submaxillary gland, A., III, 424.

Koepp & Co. Chemische Fabrik Akt.-Ges., R., thin sheets, films, and similar products of cellulose formate, (P.), B., 1193. Koeppel, C., packing density as a character-

istic of fine coal, B., 998.

Körber, F., relationships between heats of formation, structure, and properties of technically important alloys, B., 574. Influence of impurities on reactions between iron melts, iron-manganese silicates, and solid silica, B., 1347.

and Hempel, M., dependence of fatigue strength of steel on frequency of loading, B., 790.

and Mehovar, J., changes of mechanical properties with time in rolled rails, especially those of Thomas steel, B., 561.

and Oelsen, IV., effect of silicide, phosphide, and carbide formation in iron melts on their equilibria with oxides, A., I, 413. Thermochemistry of alloys. III. Heats of formation of the binary alloys iron-antimony, cobalt-antimony, nickel-antimony, cobalt-tin, copper-tin, and copper-zinc in the cast state, A., I, 608.

Oelsen, W., and Lichtenberg, H., thermochemistry of alloys. II. Direct determination of heats of formation of the ternary alloys iron-nickel-aluminium, iron-cobalt-aluminium, copperiron-aluminiumnickel-aluminium, silicon, as well as a series of alloys of the system copper-manganese-aluminium, A., I, 609.

and Pomp, A., comparison of heatresisting materials at high temper-

atures, B., 793. Körber, W. See Breckpot, R.

Koerber, Walter. See Clutterbuck, P. W. Koerner, A. M., and Tuttle, C., experimental determination of photographic density, B., 982.

Körner, H., dielectric constant, conductance, and piezo-effect of Rochelle salt, A., I,

Körnlein, M., decomposition of lactose in purification of dairy effluents by the activated sludge process, B., 734.

Körösy, F., rules concerning solubility of gases and data on solubility of krypton, Ă., I, 233.

Körperth, H., flower pigments, A., III,

Koeslag, J. D., potato growing in Holland, B., 957.

Köster, W., use of the microscope in study of structure of metals, B., 451.

and Dents. Edelstahlwerke Akt.-Ges., [alloy steel for] permanent magnet, (P.), B., 690.

and Dullenkopf, W., ternary system aluminium-magnesium-zinc. Section Al-Al₃Mg₄-Al₄Mg₃Zn₃-Al. III. Section Mg-Al₃Mg₂-Al₂Mg₃Zn₃-MgZn₂-Mg, A., I, 73, 297. Magnesium corner of the magnesium-aluminiumcadmium system, A., I, 609.

and Schmid, E., influence of beryllium, carbon, and silicon on polymorphic transformation of cobalt, A., I, 609.

and Schneider, Armin, decomposition of gold-nickel single crystals, A., I, 454.

and Wagner, E., influence of aluminium, titanium, vanadium, copper, zinc, tin, and antimony on the polymorphic transformation of cobalt, A., I, 609. See also Förster, F.

Koestler, G., and Wegmüller, E., an odorous principle with so-called characteristic goat odour as a regular constituent of goats' milk, B., 611.

Koets, P., coacervation of amylophosphoric acid and proteins, A., I, 184.

Koetschau, R., extinction coefficient and extinction quotient [of mineral oils], В., 11.

Koetschet, P., [fibrous] highly acetylated cellulose, (P.), B., 1190.

Köttgen, P., determination of easily soluble and adsorbtively bound ions, B., 705.

Kofink, W., magnetic and electric moment of the electron according to Dirac's theory, A., I, 493.

Kofler, A., microscopical examination of ergot alkaloids. II. Ergotinine, ergotoxine, and sensibamine, A., II, 393.

Kofler, L., determination of refractive indices of melts, A., I, 427.

and Müller, F. A., higher-melting crystals from solutions of pierolonic acid, A., II, 261. Microchemical differentiation of alkaloids on basis of the m.p. of their picrates, picrolonates, and styphnates, A., II, 314.

Kofoid, C. A., McNeil, E., and Bonestell, A. E., comparison of distribution of intestinal protozoa of Norway rat, wood rat, and guinea-pig with reference to $p_{\rm H}$ determined by the glass electrode, A., III, 34.

McNeil, E., and Wood, F. D., effects of arsenicals on Trypanosoma cruzi in tissue culture, A., III, 224.

Kogan, A., and Schmulian, I., chlorinated naphthalene as an acid-resistant lining, B., 1308.

Kogan, A. G., and Nikolaev, V. I., polythermals of the binary system HNO3-HCl and of the ternary system HNO₃-HCl-H₂O, A., I, 517. See also Nikolaev, V. I. Kogan, A. I., reaction between phthalic anhydride and ethylene glycol, A., I, 417. Reaction between phthalic anhydride and glycerol. II. Phthalic anhydride and polyglycerols, B., 154. and Kerman, E. J., properties of types of phenol-furfuraldehyde resins and

plastics, B., 698.

and Schvartzburg, L. E., usefulness of Ukrainian granites for acid-resisting

construction, B., 443.
Kogan, A. M., and Nasirova, K. M., conditions of contamination by copper from apparatus and vessels in the preparation of fruit and berry products, B., 974.

and Rochlina, S. L., passage of lead into foods due to tinning, B., 975.

Kogan, E. See Rappoport, E.
Kogan, F. N. See Gorin, J. A.
Kogan, G. L. See Kovalski, V. V.
Kogan, I. S. See Illarionov, V. V.

Kohl, H., Selbach, H., and Janning, A., crystalline insulin. X. Time course of insulin inactivation by normal blood, A., III, 362.

Kohlbach, D. See Prelog, V.

Kohlemann, E. See Scheunert, A.

Kohler, A. M., and Babcock & Wilcox Co., composite [furnace] brick, (P.), B., 783.

Kohler, D., rôle of calcium in imbibition in certain natural organic colloids, A., III, 133. Effect of sodium chloride on imbibition of natural organic colloids in solutions of non-electrolytes, A., 111, 214.

Kohler, E. P., and Potter, H. A., acylation and alkylation of β -diketones and β-sulphonyl-ketones, A., II, 23.

and Thompson, R. B., tautomerism of derivatives of acetomesitylene, A., II,

Kohler, G. O., Elvehjem, C. A., and Hart, E. B., growth-promoting factor associated with summer milk, A., III, 497.

Kohler, M., variation in heat-conductivity of metals in transverse magnetic field, A., I, 355.

Kohlmeyer, E. J., recovery of copper from brass and gunmetal scrap, B., 448.

See also Lange, W.
Kohlrausch, K. W. F., and Pongratz, A.,
Raman effect. LXVI. Nitrogen compounds, A., I, 345.

Pongratz, A., and Seka, R., Raman effect. LXV. Various organic substances, A., I, 345.

and Skrabal, R., Raman effect. LXIV. cycloPentane- and cyclobutane-carboxylic acids and derivatives. LXVII. Ring strain. LXXI. cycloPropanecarboxylie and acrylic acids and derivatives, A., I, 220, 345, 497.

See also Conrad-Billroth, H., Engler, W., and Kahovec, L.

Kohls, C. L. See Evans, H. M.

Kohlschütter, H. W., essential properties of compact disperse substances, A., I, 27. Significance of compact disperse materials in grinding, B., 735.

[with Melchior, O.], precipitation and dehydration of chromic hydroxide, A., Ĭ, 41.

Kohman, E. F., Eddy, W. H., White, M. E., and Sanborn, N. H., canned, homecooked, and raw fruit diets, A., III, 469. and Sanborn, N. H., dehydroascorbic

acid reductase, A., III, 155. Kohn, F., natural Peruvian asphalts, B.,

747.

Kohn, H. I., tyramine oxidase, A., III, 480. Kohn-Abrest, determination in situ of carbon monoxide in air by a blood method, and index of toxicity, B.,

and Truffert, L., examination for and determination of alcohol in blood post-mortem, A., III, 337.

Kohno, T. See Kanamaru, K.

Kohut, J., treatment [sizing] of sheets of warp threads, (P.), B., 1197.

Koialovich, N. B., chemical study of the

Solidago plant, B., 73.
Koifman, M. I., analysis and composition of pumiceous defibering stones, B., 676.

Koike, H., activity of constituents of digitalis leaf and of strophanthin on application to various parts of the alimentary canal: change of activity induced by addition of ethyl alcohol and glycerol. III., A., III, 28. Koiso, G. See Tanabe, Tomojiro.

Koizumi, E., and Kawaguchi, T., abnormal phenomena of cast copper-rich magnesium-copper alloys during heating, A.,

Koizumi, M., and Titani, T., exchange of hydrogen between pyrrole and water,

A., I, 250.

See Pêterfi, T. Kojima, H. Kojima, R. See Payne, J. H.

Kojima, T. See Matsui, M.

Kok, J. A., thermo-electric force of a superconductor against the same metal in the non-superconductive state, A., I, 292.

and Keesom, W. H., measurements of the atomic heats of platinum and copper from 1.2° to 20° abs., A., I,

Kok, J. A. F., and Bouman, J., consumption of different starches in nutritional tests with rats, A., III, 127.

Kokasehinski, G. R., and Seredkina, V. A.,

burette clamp, A., I, 583.

Kokatnur, V. R. See Autoxygen, Inc.

Kokkoros, P., lattice constants and space-

group of durangite, A., I, 604.

Kokoros, H. See Ostwald, Wolfgang. Kolaczkowska, M. See Przylecki, S. J. von.

Kolarov, N. See Balarev, D. Kolb, A. L. See Heertjes, P. M.

Kolb, H., is there a connexion between fineness of cement and water-permeability of concrete? B., 348.

Kolbach, P., [brewery] mashing [processes], B., 76.

and Antelmann, H., influence of malting conditions on composition of malt. I., B., 718.

and Kleber, W., transformation of a-hop bitter acid by wort-boiling, B., 1257.

Schulz, K. G., and Kunisch, G., determination of germinative capacity of kilned malt, B., 383.

and Simon, H., protein hydrolysis in malt mashes, "spent-grain" mashes, and malt extracts, B., 176.

Kolbe, F., food-sampling apparatus [for milk], B., 179.

Kolbe, H., evaluation of flue-gas tests, B.,

Kolbin, N. I. See Lurie, S. N. Koldaev, B. M., and Gelman, R. M., effect of fatigue and training on the ascorbic acid content of muscles, A., III,

Kolenov, I. T., and Graschtschenko, B. F., influence of foreign elements on industrial aluminium alloys, B., 450. Kolesnikov, D. H. See Rotbart, I. M. Kolesnikov, P. A. See Michlin, D. Kolesnikov, P. T., first generator gas under

conditions of underground gasification [of coal], B., 639. Underground gasification of Moscow coals, B., 639.

Kolesova, M. See Markevitsch, I. Kolitovska, J. H., preparation of hypophosphoric acid from phosphorous acid, Ā., I, 195.

Koliv, A. See Nevolin, F.
Kolke, F., tall oil fatty acids, B., 58.
Polishing and rubbing varnishes, and cleaning and polishing agents, B., 370. Exterior and interior [paint] finishes, B., 810. Phthalic acid-glycerin-tall oil resins, B., 1237.

Kolkmeijer, N. H., Krom, C. J., and Kunst, H., X-ray intensifying screens adapted to structure analysis, A., I, 479.

Kollath, R., measurement of velocity and energy distributions, A., I, 56. Secondary electron emission of solids, A., I, 274.

Koller, D. K., calculation of work of electric heating installations, B., 936.

Koller, F., purine content of thrombocytes and erythrocytes, A., III, 1.

Koller, G., and Czerny, H., limonin, the bitter principle of orange kernels. II., A., II, 204.

and Russ, H., constitution of soloric acid, A., II, 203.

Koller, J., blood-alcohol, A., III, 291.

Koller, K., gas producers, (P.), B., 318. Koller, L. R., cathode sputtering in arc discharges, A., I. 159.

and Johnson, R. P., visual observations on the Malter effect, A., I, 591.

Kolli, E., action of the pituitary hormone "lipoitrin" on fat and carbohydrate

metabolism, A., III, 320.

Kollmann, L. See Bachmair, J.

Kolobkova, E. V., phytases of wheat flour, A., III, 140.

Kolobolotzkaja, T. A., and Jaroslavtzeva. Z. A., catalytic reduction of citral, B., 523.

Kolodkina, L., kinetics of decomposition of hydrogen sulphide in a high-frequency discharge, A., I, 573.

Kolodney, M. See Fink, C. G.

Kolodny, L. See Joffe, J. S.

Kolomitschenko, M.A. See Guli, M.PKolomitzeva, M. See Markevitsch, I.

Kolotilova, A. I., and Engelhardt, V. .4., permeability, sugar distribution, glycolysis in erythrocytes, A., III, 193.

Kolpakov, I., change in acidity and iodine value of sunflower-seed oil on heating pulp prior to extraction, B., 366.

Kolpinski, V. A., extra spots in electron diffraction patterns, A., I, 226. Electron diffraction patterns obtained from thin crystalline films, A., I, 226. Form of spot in electron diffraction pattern, A., I, 351.

Kolthoff, I. M., adsorption on ionic lattices, A., I, 75. Perfection and agglomeration of crystalline precipitates on ageing, A., I, 80.

Laitinen, H. A., and Lingane, J. J., potassium iodide as a primary standard substance in permanganimetry, A.,

and Lingane, J. J., potentiometric iodide-silver titration at extreme dilutions, A., I, 96. Detection of copper with phenolphthalin-cyanide reagent, A., I, 263. Kolthoff, I. M., and MacNevin, W. M., determination of the specific surface of barium sulphate, A., I, 562.

and Moskovitz, B., coprecipitation and ageing. XI. Adsorption of ammoniocopper ion on and coprecipitation with hydrous ferric oxide; ageing of the precipitate, A., I, 457. and Noponen, G. E., exchange adsorp-

tions on the surface of barium sul-

phate, A., I, 457.

and Sandell, E. B., exchange adsorption phenomena with calcium oxalate monohydrate, A., I, 562.

and Sanders, H. L., electric potentials at crystal surfaces, and at silver halide surfaces in particular, A., I, 187.

and Yutzy, H., volumetric determination of bromide after oxidation to bromate in presence of much chloride, A., I, 197. Ageing of precipitates. XIII. Ageing of freshly precipitated silver chloride as indicated by the adsorption of wool-violet. XIV. Ageing of silver chloride as indicated by the speed of penetration of bromide ions into the solid. XV. Mechanism of the interaction between dissolved bromide and solid silver chloride, A., I, 460, 564, 614.

and Wang, C., electrode potentials of platinum, gold, and silver in various solutions of electrolytes, A., I, 465.

See also Sandell, E. B., Sarver, L. A., and Yntzy, H.

Komagata, S., and Nishikawa, M., surface conductivity on diaphragms, A., I, 519.

Komandin, A. V. See Tarasenkov, D. N. Komar, A. P., structure of plastically deformed crystals according to Laue patterns, I., A., I, 117. Laue patterns from bent sodium chloride crystals, A., I, 117.

and Mochalov, M., structure of plastically deformed crystals according to Laue patterns. II. Plastically extended single crystals of magnesium, A., I, 117.

Komárek, K., dimethylglyoxime as an

indicator in volumetric analysis; [determination of ferrous iron], A., I,

Komarevski, V. See Universal Oil Products Co.

Komarevski, V. I. See Ipatiev, V. N. Komarov, E. See Gross, E. Komarov, F., and Filimonova, G., micro-

biological decomposition of wood. I., A., III, 286.

and Nagrodski, I., sodium hypochlorite bleaching of pulps for artificial silk, B., 125.

Komarov, V. A. See Shukov, I. I.

Komarovski, A. S., and Poluektov, N. S., colour reaction with 2:2'-dipyridyl for

molybdenum, A., I, 377. Komarovski, M. S. See Minjovitsch, M. A.

Komatsu, C. See Kaneko, Hideo. Kometiani, P. A., and Tzuladze, T. E., distribution of phosphorus compounds

in cows' milk, A., III, 200.

Komiakov, P. G. See Gudtzov, N. T.

Komlos, D., road and other surfaces, building materials, blocks, slabs, or other articles, (P.), B., 677.

Kommel, A. R. See Derge, G.

Kommers, J. B., overstressing and understressing [of steels] in fatigue, B., 790. Komor, J. See Noddack, W.

Komori, S., and Ueno, Sei-ichi, unsaturated lower fatty acids; crystalline derivatives, A., II, 482. New unsaturated fatty acid C₁₀H₁₈O₂ in the oil of Rindera obtusiloda, A., III, 332.

Komovski, A. F. See Kargin, V. A.

Komovski, G., use of the centrifuge for

investigating alloys, A., I, 456.

Kompaneietz, A. S., absorption of sound by crystals at high temperatures, A., I,

Komppa, G., and Beckmann, S., supposed transition of camphor or campholenic acid into pinonic acid; dehydration of dihydroxydihydro-a-campholenic acid, A., II, 67.

and Klami, A., complete synthesis of dl-verbanone, dl-d-pinene, and dl-pinane, A., II, 252. and Komppa, O., total synthesis of

camphenilone and of α - and β -fencho-

camphorone, A., II, 67. and Rohrmann, W., preparation of hexahydroterephthalic acid, A., II, 149.

Komppa, O. See Komppa, G.

Kon, G. A. R., Linstead, R. P., and Simons, C., synthesis of dicyclic a-ketones with an angular methyl group, A., II, 343.

See also Farmer, E. H., Farmer, S. N., and Fitzgerald, F. S.

Kon, S. K., effect of light on vitamin-C of milk, A., III, 201. Nutritional value of milk and milk products, B., 79. Milk and nutrition. VII. Effect on vitamin-B complex, B., 609.

and Watson, M. B., effect of light on vitamin-C of milk, A., III, 78. Vitamin-C content of cow's milk, A., III, 154. Milk and nutrition. VIII. Effect on vitamin-C, B., 609. See also Campion, J. E., Folley, S. J.,

Gillam, A. E., and Henry, K. M.

Konaka, Y., catalytic polymerisation of ethylene at atmospheric pressure. I.— V., A., II, 43, 438. Paraffin wax in Fushun shale oil. I.—XI., B., 752, 1298.

Koncz, A. See Gärtner, K.

Kondaiah, K. See Rane, M. B.
Kondakov, V. V. See Semenov, A. I.
Kondakova, M., and Katznelson, M. M., β-methyl-α-ethylvaleric acid, A., II, 133.

Kondo, H., and Keimatsu, I., alkaloids of Sinomenium and Cocculus. XXXVIII. Alkaloid of Stephania cepharantha, Hayata, A., II, 39.

Ochiai, E., and Tsuda, K., alkaloid of the Chinese drug, "Kuh-Seng." II., A., II, 526.

and Suzuki, H., constitution of perillene, A., II, 25.

and Tomita, M., alkaloids of Sinomenium and Cocculus. XLIV. Phenolic alkaloid of *C. trilobus*, D.C.; constitution of normenisarine. XLV. Review on the biscoclaurine alkaloids; consideration from the stereochemical

and biogenetic viewpoint, A., II, 219. Tomita, M., and Uyeo, S., Sinomenium and Cocculus alkaloids. XLVI. Methylisochondodendrine, A., II, 475.

and Uyeo, S., syntheses of isomeric ethylphenanthridines, A., II, 306. Lycoris alkaloids. X. Constitution of lycorine, A., II, 311.

Kondo, K., Fujioka, K., Shinano, S., and Mitsuda, H., composition of meat of the flat fish (Pseudorhombus cinnamomeus, T. and S.), A., III, 8.

Kondo, K., and Iwamae, H., isoionic reaction of hen ovalbumin, A., III, 340. Refractive index of hen ovalbumin. I. and II., A., III, 340.

Kubo, Masanori, and Bando, K., composition of lobster meat, B., 282.

and Mihara, T., composition of bonitomeat (Katsuwonus pelamis, L.); properties of proteins, A., III, 8.

and Murayama, M., colorimetric determination of carbohydrate in protein molecule; (modified Sörensen method),

A., III, 410.

and Shinano, S., composition of dried meat of the sea-ear; glycogenase of the fresh sea-ear (Haliotis gigantea, Gm.), A., III, 67. Nutritional chemistry of flowers. I. Vitamins and proteins in wistaria flowers (Kraunhia floribunda, Taub., var. typica, Mak.), A., III, 368.

and Yamada, T., α - and β -caseinogen, A., III, 456.

Kondô, M., and Okamura, T., storage of rice in concrete silos, B., 832.

Takahashi, R., and Terasaka, Y., evaluation of barley, wheat, soya bean, and

rape seed, B., 479. and Terasaka, Y., storage of rice. XV. Comparison of calcium oxide and calcium chloride as desiccating agents for rice stored in tin containers, B., 487.

Kondo, S., and Suzuki, Shinichi, tale porcelain. I. and II., B., 240. Loadbearing ability of ceramic products at high temperatures and a new method

of testing for it, B., 1340. and Yamauchi, T., calcium silicates. II. Microstructure, A., I, 575. X-Ray study of Japanese Portland cement clinkers. I., B., 674. Efflorescence of concrete. I., B., 675. Inversion of quartz to tridymitc. IX. Thermal expansion of eristobalite. X. Microstructure of silica brick used in the open-hearth furnace, its regenerator, and tank furnace for long periods. XIII. Preparation of tridymite brick. XIV. Physical properties of silica brick prepared experimentally, B.,

Yamauchi, T., and Konishi, Kohei, inversion of quartz to tridymite. XII. Choice of mineralisers for preparation of tridymite brick, B., 1338.

Kondo, Y., microchemical testing of materials, B., 1141.

See also Kisser, J.
Kondoguri, V. V., determination of actinium, A., I, 47. Crystallisation of supercooled sulphur in an electric field, A., I, 117.

See also Burkser, E. S., and Podaschevski, M, N.

Kondorskaja, N.S. See Timofeev, P.V.Kondorski, E., nature of coercivity, A., I,

Kondrateev, E. V., and Kutniev, S. K., changes in chemical composition of peat in self-heating, B., 102.

and Vener, I.M., dependence of tendency of peat to spontaneous ignition on chemical composition, B., 102.

See also Kutniev, S. K.

Kondrateev, V., effective cross-section in recombination of atoms with radiation, A., I, 16. Air afterglow and thermal radiation of nitrogen peroxide, A., I, 342. Optical determination of labile products in flames, A., I, 568.

Kondrateev, V., Kondrateeva, E., and Lauris, A., photochemical oxidation of hydrogen iodide, A., I, 38.

and Setkina, O., Raman spectrum of an aqueous solution of KSeCN, A., I, 112. and Siskin, M., radicals of OH in the electric discharge in water vapour, A., I, 7. Radical OH in hydrogen flames at low pressures, A., I, 493.

See also Avramenko, L., Jakovleva, A., Kondrateeva, E., Kondrateeva, H., and Siskin, M.

Kondrateeva, E., and Kondrateev, V., carbon monoxide-oxygen flame. II. Influence of composition on the intensity of the visible luminosity of the flame. III. Absolute intensity of electronic emission of the flame, A., I, 621.

See also Kondrateev, V.

Kondrateeva, H., and Kondrateev, V., flame of carbon monoxide and oxygen. II. Influence of composition of the mixture on intensity of visible radiation from the flame, A., I, 568.

Koneff, A. A., and Lyons, W. R., rapid

embedding with hot low-viscosity nitro-

cellulose, A., III, 334.

Konheim, H. S., and Albersheim, W. J., viscosity-measuring device, (P.), B., 636. Koningsberger, C. See Kögl, F.

Konishi, Kametaro, and Tsuge, T., determination of elements with the spectrograph by arc process. II., A., I, 261. Konishi, Kohei. See Kondo, S.

Konishi, M., colour reaction and iodometry of oxidisable [plant and animal] sub-

stances. I., A., III, 200. Konjaev, P. S. See Mokruschin, S. G. Konkova, V. A., hydroxybutylcellulose and its mixed ethers. II. Benzylhydroxybutylcellulose, B., 24.

See also Danilov, S. N. Konn, G. K. T. See Sutherland, G. B. B. M. Kono, M., and Utsunomiya, E., diffusion of electrolytes through a membrane. I.,

Konobejevski, S. T., theory of construction of diagrams of state of alloys, A., I,

and Tarasova, V. P., phase diagram of Cu-Zn at low temperatures, A., I, 176. Diagram of state and transformations occurring in the decomposition of the a solid solution in the copper-tin alloys, A., I, 608.
Konopicky, K., sintered magnesite.

Reactions during sintering, B., 1051. and Kassel, H., sintered magnesite. I. Determination of the constituent minerals, B., 1051.

Konopinski, E. J. See Livingston, M. S.

Konopley, A. See Kozulin, N. Konov, V. P. See Rapoport, I. B.

Konovalov, I. N., and Rogalev, I. E., behaviour of nitrogenous substances during yarovisation of plants, A., III, 408.

Konovalov, S. See Kizel, A. Konovalov, V., and Frisch, S., [analysis of] mixtures of argon and nitrogen, A., I, 45. Rôle of collisions of the second kind in luminescence of vapour mixtures Na-Mg, Na-Zn, and Na-Cd, A., I, 104.

Konovalova, L., and Orekhov, A. P., Senecio alkaloids. IV. Alkaloids of S. vulgaris; degradation of senecionine, A., II, 435.

Konovalova, R. A., alkaloids of different varieties of Senecio, A., II, 265. See also Orekhov, A. P.

Konrad, E., synthetic rubber (Buna), B., 265.

See also Zeh, L. Konstantinov, A. K. See Slavinski, M. P. Konstantinova-Schlezinger, M., photo-chemical decomposition of sulphur dioxide, A., I, 38. Determination of atmospheric ozone at the altitude of 9620 m. by a fluorescence method, A., I,

Konstruktions & Patente Akt.-Ges., apparatus for drying wood and similar material, (P.), B., 577.

Konsuloff, S., transference of hormones in

milk, A., III, 75.

Kontz, E. C., jun. See Ezzard, H. S.

Konvisor, V. I. See Adadurov, I. E.

Konya, H. See Matsuda, R. Konz, W. See Wieland, H. Koo, E. C., expression of vegetable oils. I. Cottonseed oil, B., 696.

and Cheng, S. M., intermittent cracking of rape-seed oil, B., 257. Liquid fuel from vegetable oils, B., 517.

Kooijmans, L. H. L., and Leeflang, K. W. H., absorption of iodine [from water supplies] by copper piping, B., 92. Koolhaas, \hat{D} . R., and De Vos, \hat{L} ., simplified

apparatus for determination of essential oil content, B., 287. Balsam from Pinus insularis and P. merkusii, B.,

and Koppel, C. van der, annatto seed, B.,

Koon, A. W., and Columbian Rope Co., preservative means for [vegetable] ropes, etc., (P.), B., 127.

Koopmann, K. See Durau, F.
Koopmans, S. See Roos, J.
Koops, W. S., Dingemanse, E., and Luwisch, D., effects on blood pressure of substances contained in liver extracts, A., III, 135.

Kooyman, D. J., state and localisation of inorganic salts in the skin as revealed by extraction and microincineration, A., III, 167.

Koozin, E. See Goodrich, F. J.

Kopac, M.J., and Chambers, R., coalescence of living cells with oil drops. II. Arbacia eggs immersed in acid or alkaline calcium solutions, A., III,

See also Chambers, R.

Kopaczewski, W., gelatinisation of proteins by bases, A., I, 304. Animal species and coagulation of serum, A., III, 115. Gelation of blood constituents, A., III, 115. Activity of enzymes and $p_{\rm H}$, B.,

and Paille, R., gelation of whole blood, A., III, 196. Kopantzev, M., regeneration of sulphurous

acid and relief liquor in sulphite pulping.

Kopcewicz, T., effect of temperature on Raman frequencies of topaz, beryl, and calcite crystals, A., I, 282.

See also Rothé, E. Kopelevitsch, G. V_2 , and Gorschtein, K. I_1 , use of new solvents for removing naphthalene from coke-oven gases, B., 9.

Kopeliovitsch, E. L. See Charmandarian,

Kopeliovitseh, I. See Agroskin, A. Kopeloff, L. M., and Kopeloff, N., optical activity of lactic acid produced by Lactobacillus acidophilus and L. bulgaricus, A., III, 316. Kopeloff, N. See Kopeloff, L. M.

Koperina, A., and Kahbab, S., denicotinised cigarettes, B., 840.

Kopet, J. C., and Goodrich, F. J., relation of barbital and phenobarbital to granulo-

cytopenia, A., III, 350. Kopfermann, H., and Krüger, H., hyperfine structure of Rb resonance lines, A., I, 54. Enrichment of the argon isotope ³⁶A and the isotope shift effect, A., 1, 335.

Kopfler, F. W. See Fowler, A. P. Kopilov, I. G. See Dubinski, A. P. Kopilov, V. F., burning of gases, A., I, 190.

Kopka, A. See Sornet, F.

Koplanov. See Schtscherbakov. Koposova, V. I. See Obukov, A. P. Kopp, J. See Braun, J. von.

Koppanyi, T., Dille, J. M., and Linegar, C. R., [pharmacology of] barbiturates. XVII. Effect of prolonged chloroform anæsthesia on duration of action of barbiturates. XIX. Barbituratepierotoxin antagonism, A., III, 25, 93. See also Linegar, C. R.

Koppejan, C. A., phosphatase test and its reliability for detecting pasteurisation [of milk] at low temperatures, B., 79.

Koppel, C. van der, crops producing drying oils [in Dutch East Indies], B.,

See also Koolhaas, D. R.

Koppenhöfer, A., surface protection of light metals, B., 797.

Koppenhoefer, R. M., distribution of lipins in fresh ox skin, A., III, 7. Lipins of steer hide. II.—IV., B., 817, 950. Kopper, H., Raman spectrum of keten, A.,

I, 63.

See also Dadieu, A. Koppers Coke Oven Co., Ltd., and Phillipson, G. A., controlling temperature in horizontal gas-retort settings, (P.), B., 112.

Koppers Co. of Delaware, coke-oven gas by-product recovery, (P.), B., 319. and Bragg, G. A., dephenolising ammonia liquor, (P.), B., 1159.
Butterworth, C. E., and Schwab, J. W.,

treatment of sulphur-mining bleedwater, (P.), B., 1203. and Denig, F., gas-liquor treatment and apparatus, (P.), B., 520.

and Hansen, C. J., removal of hydrogen sulphide and ammonia from gases, (P.), B., 208.

Huffman, D. D., and Shively, W. L., treatment of [fuel] gas, (P.), B., 1159. and Montgomery, E. W., sludge handling system, (P.), B., 1010.

and Shaw, J. A., separation and purification of gaseous mixtures, (P.), B., 112. Obtaining hydrogen sulphide, (P.), B., 135.

and Shively, W. L., treatment of [fuel] gas, (P.), B., 1159.

and Van Ackeren, P., [gas] producer, etc., (P.), B., 1158.

Koppers Gas & Coke Co., and Kester, E. B., apparatus for extracting substances such as phenolic materials, (P.), B., 1159.

See also Kester, E. B.

Koppers Ges.m.b.H., H. See Koppers' Industr. Maats. N.V., H.

Koppers' Industrieele Maatschappij N.V., H., hardened briquettes from coking coal, (P.), B., 643. Non-smoking fuel from agglomerates of rich coal, (P.), B., 643. Silica bricks, etc., (P.), B., 672.

and Koppers Ges.m.b.H., H., horizontal chamber oven for production of gas and coke, (P.), B., 409. Koppers' Industrieele Maatschappij N.V., H., and Koppers Ges.m.b.H., H., apparatus for treating gases or vapours with liquids, (P.), B., 512. Doors for horizontal chamber ovens for production of gas and coke, (P.), B., 518. Levelling beams for horizontal-chamber coking ovens, (P.), B., 643. Mixture of carbon monoxide and hydrogen suitable for synthesis of

hydrocarbons, (P.), B., 1009.

Koppeschaar, E., drying [sugar-beet] filter-press cake, B., 716.

Kopsch, U. See Walker, W. O. Kopteva, A. See Bulin-Sokolov, V. Kopwillem, J., relation between the amount

of gas formed by decomposition of [Estland] oil shale and the temperature of heating, up to 400° under ordinary pressure, B., 516. Influence of calcium oxide, ferric oxide, and reduced bog iron ore on oil-shale distillation, B., 516. Kôra, A., specification of silica bricks for

coke ovens, B., 346. Korablev, I. V. See Strishevski, I. I.

Kořán, J., influence of bog-water on water of the Upper Vltava River, A., I, 481.

Korányi, \overline{A} ., Szablics, E., and Szenes, T., action of human saliva in increasing blood-sugar, A., III, 291.

Korenchevsky, V., and Dennison, M.,

co-operative activity of testosterone propionate with 45-androstenediol and with costradiol in male rats, A., III, 321.

Dennison, M., and Eldridge, M., effect of 1 androstenedione and 15 androstenediol on castrated and ovariectomised rats, A., III, 185. Prolonged treatment of castrated and ovariectomised rats with testosterone prop-

ionate, A., III, 185.

Dennison, M., and Hall, K., action of testosterone propionate on normal adult female rats, A., III, 278. Effects of testosterone and testosterone propionate on adult male rats (compared with those on female rats), A., III, 402.

and Hall, K., effects on ovariectomised rats of progesterone alone and in combination with the other sexual hormones, A., III, 361.

Korenman, I. M., micro-reactions, A., I,

48. Detection and determination of phosphates in presence of salts of arsenic and other acids, A., I, 97. Increasing accuracy of micro-volumetric determinations, A., I, 196. Microchemical detection of metals in alloys, B., 1065.

and Anbroch, Z. A., micro-determination of antimony, arsenic, iodides, and thiocyanates by direct titration with potassium iodate, A., I, 48.

Lisenko, A. M., and Mordusehenko, C. V., rapid micro-determination of copper and cobalt, A., I, 531.

and Lukascheva, E. N., microchemical reaction for copper, using ammonium mercuric thiocyanate, A., I. 328.

and Mesonshnik, S. S., micro-reactions of lead, A., 1, 199.

Tenenbaum, A. L., and Lialiuschko, S. M., micro-determination of nickel, A., I, 200. Korff, F. A. See Kaplan, E. Korff, S. A., study of [atomic] nucleus,

See also Millikan, R.A.

Korgin, electric properties of colloidal silicic

Kořinek, J., antisepsis, A., III, 148. Korinfski, A. A., and Golubeva, Z. F., rapid determination of small amounts of yellow in red phosphorus, A., I, 197.

Koritnig, O., evaporative powers of various heat sources, B., 987.

Koritnig, O. T., painting of [metal] patterns by spraying, B., 590.

Korn, R., comparative tests with the new Schopper bending fatigue tester and the folding tester [for paper], B., 332.

Kornblum, N. See Davis, T. W. Korneeva, A. V. See Poljakov, M. V. Kornev, J. V., fertilising eroded [soil]

slopes, B., 708.

Kornfeld, G., formation of hydrogen peroxide from hydrogen atoms and oxygen molecules, A., I, 247. Primary process of photodissociation in sulphur trioxide, A., I, 317. , and Khodschaian, S., thermal formation

of hydrogen chloride, A., I, 365.

Kornfeld, H., recrystallisation [of iron]

during hot-working, B., 350.

Kornfeld, M., nucleus formation in recrystallisation. I. Dependence of time of incubation on deformation and heating conditions. III. and IV. Orientation of recrystallisation nuclei, A., I,:171, 224, 349. Kinetics of plastic deformation of crystals, A., I, 228. Weakening of a deformed [aluminium] crystal on relaxing, B., 51.

and Schamarin, A., nucleus formation in recrystallisation. V. Recovery and the rate of nucleus formation, A., I, 349.

Kornilov, I. I., velocity of polymorphic transformation of the compound MgCd in the system magnesium-cadmium, A., I, 508.

Kornreich, E., bleach liquor, oxycellulose,

and yellowing, B., 537.

Korobov, N. N., Kunin, T. I., and Post-nikov, B. F., reactions of calcium phos-phate in aqueous solution at high temperatures, B., 340.

Koroknay, S., dry matter, albumin, and sugar contents of eggs, B., 181.

Korolev, A., and Rostovzeva, K., azocoupling in volumetric analysis, A., I,

Korolev, F. A., application of Toeppler's .: method to determination of absorption of supersonic waves in liquids, A., T, 353. Korolev, L. I., agricultural chemical ovalu-

ation of common forms of nitrogenous fertilisers, B., 165. Action

Korolkov, S. I., use of active carbon in the sugar industry, B., 380. Deteran immination of colloids in sugar-beet products, B., 380.

Virskaja, G. K., and Krivorntschko, N. A., addition of active carbon to sugar juice before evaporation, B., 380. See also Loginov, N. E.

Korotov, S. J. See Rudakov, G. A. Korovin, G. M., and Jurkin, E. N., new apparatus for determining small amounts of carbon in steel by the baryta method,

B., 352. Korpus, Z. See Sokolova, M. Korschak, V. V. See Schorigin, P. P.

Korsching, H. See Schüler, H.

Korschun, G. V., and Roll, K. V., absorption spectra of pyrrole and its derivatives. IX. Absorption spectra of acetyl derivatives, A., I, 494.

Korshavin, N. P., physical and chemical properties of polystyrene. I. Mechanical properties, B., 944. Korsheniovski, G. A., simultaneous volumetric determination of calcium and magnesium, A., I, 198. Korsungskaja, E. See Cheraskova, E.

Korth, K., infra-red absorption spectra of photo-chemically sensitised alkali halide crystals, A., I, 166.

Kortüm, G., band displacement as consequence of intermolecular forces, A., I, 61. Optical behaviour of dissolved ions and its significance for structure of solutions of electrolytes. V. Optical absorption and dispersity of organic dye ions in aqueous solution, A., I, 77. Photo-electric spectrophotometry, A., I,

Korushev, A. S., method and time of introducing fertilisers, B., 708.

Korvozeo, A. E. See Hoeflake, J. M. A. Korzinkina, J. V. See Tichonov, A. V. Kosack, II. See Wittig, G.

Kosaka, Y., and Toda, H., fusibility of coal ash. VII. Fusion-curve method for determining the fusibility. VIII. Fluxing effects of lime and ferric oxide on coal ashes, B., 1000.

Yamanouchi, A., and Tanaka, K., utilisation of Fushun shale oil. III. and IV. Effect of catalysts and other factors on cracking [and] hydrogenation of the oil, B., 750.

Koschara, W., Tswett's adsorption analysis (chromatographic analysis), A., I, 196.

Koschorrek, K. See Widenbauer, F. Koschtojantz, C. S., choline-esterase in invertebrates, A., III, 31.

Koschuchova, M. A. See Plaksin, I. N. Koser, S. A. See Saunders, F. Koshina, E. I. See Grigoriev, P. N.

Kosmath, W., measurement of radon content of springs and other natural waters, A., I, 198. Determination of instantaneous radon content of open air in the neighbourhood of the earth's

radon in the atmosphere, A., I, 202. and Gerke, O., [radioactive contents of air at Badgastein], A., I, 101.

surface, and vertical distribution of

Kosmati, E. S. See Izbekov, V. A. Kosolapov, Z. E. See Rapoport, I. B. Koss, A., titre of solid animal fats and their mixtures, B., 584. - ಮಾನ್ಯಾಕ್

Kosse, J. See Bloch, L.
Kossel, W., illustration of use of optical

lattices for X-ray spectroscopy, A., I,

Kossendey, F. See Zwieg, W. Kossiakoff, A. See Noyes, A. A. Koste, H., Kayser, E., and Waibel, W.,

bleaching and finishing [with mercerisation] of ootton+viscose staple fibre materials, B., 335.

Kostel-Janskaja, S. G. Sec Baschkirov, A. N.

Kosten, C. W., and Zwikker, C., method of measuring and an apparatus for determining elastic behaviour of clastic substances, B., 400. Koster, H. See Shapiro, A.

Koster, J., treatment of domestic [lowgrade | chrome ores, B., 42. See also Knickerbocker, R. G.

Kosting, P. R., stress-relief annealing of high-strength monel-metal plate, B.,

Kostlovski, M. T., and Penner, A. J., micro-chemical reaction of hydrocyanic acid with alloxan and various amines, A., I, 45.

Kostrikin, V. M. See Rusanov, A. K ...

Kostron, H., precision determination of lattice constants of coarse-grained

materials, A., I, 268. and Ruppel, E., X-ray illumination for revealing the primary structure of metals, B., 1356.

Kostrov, I. V. See Medinski, C. B.

Kotake, M., and Kuwada, K., toad poisons. VI. Constitution of ch'an su (senso). VII. Constituents of ch'an su and the constitution of cinobufagin and cinobufotalin, A., II, 347; III, 341

and Mitsuwa, T., strychnine. VI. Action of perbenzoic acid on strychnine and its derivatives, A., II, 217.

Mori, K., and Mitsuwa, T., strychnine.
III. Fission of strychnine and its derivatives with alkali. VII. Absorption spectra of strychnine and its derivatives, A., II, 172, 312.

and Yokoyama, M., strychnine. V. neoStrychnine, A., II, 311.

See also Ozeki, S.

Kotake, Y., and Goto, S. [with Hamada, T., Tanaka, K., and Kotake, Y., jun.], intermediary metabolism of tryptophan. XXVII. Change of configuration of d-tryptophan in the animal body, A., III, 383.

Kotake, Y., jun., and Itō, N., intermediary metabolism of tryptophan. XXV. Isolation of d-kynurenine, A., III, 345. See also Kotake, Y.

Kotecki, A., new fluctuation bands of cadmium vapour, A., I, 336.

Kotelevski, J. P. See Charmandarian, M. O., and Teraschkevitsch, V. R.

Kotelkov, N. Z. See Gerschenovitsch, M.S.

Kotera, A. See Sakurada, I.

Koteswaram, P. See Rao, I. R. ... Kothari, D. S., possibility of detecting neutrinos, A., 1, 6.

See also Saha, M. N.

Kothavalla, Z. R., and Snnawala, S. D., microphotographic study of fat globules of milk of Indian breeds of cows and buffaloes, A., III, 253.

Kothe, H., valve galvanometer for glass electrodes, A., 1, 582. See also Kröner, W.

Kotkis, A. J. See Alexander, W. F. Kotkov, S. A., apparatus for rapid determination of moisture content of peat, coal, and other materials, by determination of condenser capacity, B., 404.

Kotlukov, V. A., coals of the Spitzbergen deposits, B., 101.

Koton, A.G. See Nikolaev, V.I.

Koton, M. M., synthesis of esters by dehydration of alcohols by coppercerium catalysts. III., A., II, 46. See also Dolgov, B. N.

Kotov, V. See Kasatotschkin, V.

Kotowicz, A. See Wasilewski, L.
Kotowski, P., and Telefunken Ges. für
Drahtl. Telegraphie m.b.H., variable
resister unit; [microphone], (P.), B.,

Kotrelev, V. See Losev, I. P. Kotschergin, S. M., evaluation of quality of bright chromium plate, B., 579.

Kotscheschkov, K. A., complex formation and halochromy in organic tin compounds, A., II, 357.

and Alexandrov, A. P., lead organic compounds containing the carbethoxygroup, A., II, 221.

and Borodina, G. M., reduction of lead organic nitro-compounds, A., II, 528.

Kotscheschkov, K. A., Nadi, M. M., and Alexandrov, A. P., aryl tin hydroxyl and halide compounds of the type SnAr₃X, A., II, 127.

See also Nesmejanov, A. N.

Kotschkin, A. See Kuzin, A. Kotschnev, N. See London, E. S.

Kotschoponlos, M., characteristics of buffalo and sheep milk, A., III, 376. Alcoholic fermentation of carob-bean pulp, B., 607. Kotschubei, N. P., dynamidon briek from bauxite, B., 443.

Kotschukova, N. B. Sec Zubkova, S. R.

Kottas, H. See Fuchs, O. P.

Kottek, F. See under Bersworth Labs., F.C. Kotterba, M., drying of green ceramic wares or similar goods, (P.), B., 39.

Kotukov, A., solvent action of the bound water of soil, A., I, 235. Heat capacity of bound water, A., I, 239. Kotzschmar, A. See Wieland, H.

Kou, F. C. See Tang, T. H. Kou, K. C. See Franck, H. II. Koudela, G. Sce Jilek, A.

Koulev, G. A. See Goloub, S. I.

Kovache, P., testing of lubricants, B., 1299. Kovács, I., calculation of the rotation constants of diatomic molecular terms from perturbation data, A., I, 552.

Kovács, J. See Gróh, J.

Kovalenko, G. M., influence of carbon tetrachloride vapour on puncture vol-

tages of air, A., I, 347.

Kovalev, A. A. See Verner, A. P.

Kovalev, H. M. See Adadurov, I. E. Kovalevskaja, N. P., influence of electrolytes on structure formation in krasnozem suspensions, B., 1098.

Kovalevski, \bar{I} . I., theory of sizing of paper, B., 1036.

Kovalski, V. V., mineral metabolism of dental tissue, A., III, 7.

Glezina, O. M., Baranski, V., Kogan, G., Rutherg, R., and Tschitschkina, N., mineral structure of dental tissue of the guinea-pig, A., III, 7.

Kovats, J. See Krzemieniewski, S. Kovats, L. de T. See Di Gleria, J.

Kovda, V. A., and Bistrov, S. V., alkalinity of solonetz soils, B., 952.

Kovtun, E. I. See Utevski, A. M. Kovtun, M. S., determination of ferrous and ferric oxides in electric and openhearth furnace slags, B., 351. Application of the mixed indicator methyl-redmethylene-blue to determination of nitrogen in steel, B., 1062.

Kowalczyk, L., purification and utilisation of alcohol. I.—VI., B., 522, 646, 1259. Kowalke, O. L. See Altpeter, R. J.

Koyama, K., metabolism of fatty acids in

the liver, A., III, 345.

Koyama, R., high-pressure hardening of oils by mixed catalysts with a high copper content, B., 808. Hydrogenation of fish oils at low pressure. I., B., 941.

See also Ueno, Sei-ichi. Koyama, S. See Soda, T.

Koyanagi, H. See Tsujimoto, M. Kozák, J., composition of sherry, B., 177. Kozakevitsch, S. S., and Efremova, O. S., determination of resistance to corrosion

of refractory materials by slag, B., 671. Kôzaki, T., invertase. I.—IV., A., III, 180.

Kozelka, F. L., and Tatum, H. J., cobalt colour reaction for detection of barbiturates, A., II, 130. Barbiturates in cerebrospinal fluid, A., III, 136.

Kozima, H., and Mizushima, S., Raman effect and dipole moment in relation to free rotation. VI., A., I, 345.

Kozima, M. See Saito, M.

Kozlov, L. I. See Feldman, J. A. Kozlov, N., catalytic addition of hydrogen bromide and chloride to acetylene, B., 521.

and Bogdanovskaja, R., condensation of acetylene with aromatic amines. Condensation with o- and p-anisidine in

presence of CuCl and HgCl₂, A., II, 75. Dinaburskaja, B., and Rubina, T., condensation of acetylene with aromatic amines. VI. Condensation with aniline in presence of HgCl2, HgCl, and HgBr₂, A., II, 75. and Duberschtein, G., desulphurisation

of benzene by means of aluminium

chloride, B., 313.

and Fedoseev, P., condensation of acetylene with esters of aminobenzoic acids, A., II, 209. Condensation of acetylene with p-nitroaniline; new synthesis of 6-nitroquinaldine, A., II, 209.

Fedoseev, P., and Drabkin, I., action of alkalis on aryl and aryl alkyl ketones, A., II, 103.

and Gimpelevitsch, E., condensation of acetylenc with aromatic amines. IV. Condensation with aniline and p. toluidine in presence of silver nitrate, A., II, 75.

and Golod, M., condensation of acetylene with aromatic amines. III. Condensation of acetylene with aniline in presence of cuprous chloride and

nitrobenzene, A., II, 32. and Golubovskaja, N., catalytic hydrolysis of ether, A., I, 144.

and Mitzkevitsch, D., condensation of acetylene with aromatic amines. XII.,

A., II, 375. and Mogilanski, J. D., catalytic condensation of acetylene with toluidines, A., II, 185.

and Patschanova, R., condensation of acetylene with aromatic amines. VII. Condensation with aniline in presence of HgI₂, A., II, 75.

and Rodman, G., condensation of acetylene with aromatic amines. XI. Condensation of acetylene with aniline in presence of mercury salts, A., II, 286.

and Serko, O., condensation of acetylene with aromatic amines. mediate products of condensation of acetylene with amines, A., II, 286.

Kozlov, S., rapid determination of moisture in oil seeds and cake, B., 390.

Kozlov, S. J. See Kainarski, I. S. Kozlov, V. V., and Simanovskaja, A. V.,

analysis of dyes. V. Analysis of insoluble azo-dyes and coloured varnishes, B., 881.

See also Voroshcov, N. N. Kozlova, E. See Bruns, B.

Kozlowski, A., soil conditions in relation to little leaf or rosette of fruit trees in California, B., 958.

Kozlowski, L., electrical birefringence of mixtures of nitrobenzene and hexane in the neighbourhood of the critical solution

temperature, A., I, 355.
Kozlowski, W. See Smolenski, K.
Kozmina, N. P., and Reznitschenko, M. S., proteoclastic enzyme of wheat and barley, A., III, 429.

Kozodaev, M. S. See Alichanov, A. I. Kozuchova, O. S. See Samochvalov, K. N. Kozulin, N., and Konopley, A., accelerated methods of polymerisation and oxidation of linseed oil, B., 1365.

Kraan, J. K. See Dirken, M. N.Krabbe, H. See Westenbrink, H. G. K.Krach, H. See Krause, A.

Kracke, R. R., and Parker, F. P., relation of drug therapy to agranulocytosis, A., III, 121.

Kraeber, L., and Luyken, W., magnetic properties of natural and artificial iron-oxygen compounds. II. Change of magnetic properties of ferric hydroxides by heating in different gaseous atmospheres, A., I, 402. See also Luyken, W.

Krächter, H. See Durau, F. Krägeloh, H. See under Krägeloh & Co., T. Krägeloh, P. See under Krägeloh & Co.,

Krägeloh & Co., T., [irregularly shaped] articles from plastic substances, (P.), B., 814.

Kraemer, E., crusher, (P.), B., 302. Kraemer, E. O. See Bailey, E. D.

Kraemer, O., evaluation of plywood, B.,

1345. Krämer, T., artificial marble, (P.), B., 244.

Kränzlein, G., development, use, and chemistry of synthetics, B., 154.

Kränzlein, P., Friedel-Crafts reaction. I. Synthesis of new pharmaceutical compounds. II. Action of phthalic anhydride on acylarylamides, A., II, 432,

Kraeva, L. P. See Baschkurov, A. N. Kraft, D., complete utilisation of rubberbearing plants, B., 472. Kraft, G. H., and Kraft-Phenix Cheese

Corp., comminuted shortening, (P.), B., 494.

Kraft, J. See Chrétien, A.

Kraft, K., constitution of glauconic acids. VI., A., II, 322. Biochemistry of fluorine. I. Antagonism between fluorine and thyroxine, A., III, 103.

and May, R., biochemistry of fluorine. II. Determination in blood and [min-

eral] waters, A., III, 288.

and Porsch, H., glauconin. V. Constitution of glauconic acid, A., II, 109.

Kraft, V. B., and Gurvitsch, T. A., rational analysis of fireclays, B., 671. See also Gurvitseh, T. A.

Kraft, W. W., and Lummus Co., [steam-] distillation of oils, (P.), B., 646.

Kraft-Phenix Cheese Corporation, treatment of cheese, (P.), B., 978.

See also Chapman, C. F., Clickner, F. H., and Kraft, G. H.

Kraft-Ström, H., Wülfert, K., and Sydnes, O., determination of lead in whole blood, A., III, 292.

Krahl, M. E., and Clowes, G. H. A., stimulation of oxygen consumption and suppression of cell division by di- and tri-halogenated phenols, A., III, 64. Cell metabolism and cell division. II. Stimulation of cellular oxidation and reversible inhibition of celldivision by di- and tri-halogeno-phenols, A., III, 64.

Keltch, A. K., and Clowes, G. H. A., respiratory effects of substituted phenols at varying carbon dioxide tensions, A., III, 424.

See also Clowes, G. H. A.

Krainer, H., relationship between the transition velocity of austenite and the deoxidation process, B., 1213.

Kraini, P. J. See Adadurov, I. E. Krajewski, S. See Wasilewski, L. See Adadurov, I. E.

Krakau, K. A., Muchin, E. J., and Heinrich, M. S., equilibrium diagram of the system Na₂SiO₃-PbSiO₃-SiO₂, A., I. 243.

Krall, H. See Lai, K. B.

Kramer, B. See Sobel, A. E.

Kramer, E., metal [bronze] powders, (P.), B., 147. Self-lubricating bearings (P.), B., 309. Materials for self-lubricating bearings, (P.), B., 309.

Kramer, G., detection of related elements in presence of one another in one drop, A.,

Ī, 375.

Kramer, J., amorphous state of metals, A., I, 553. Structure of thin metallic layers, A., I, 553.

See also Lehrman, L.

Kramer, M. M., vitamin content of foods in relation to human nutrition, B., 1400. See also Leuschen, M. E., McCampbell,

C. W., and Whitnah, C. H.
Kramer, P. J., relation between rate of transpiration and rate of absorption of

water in plants, A., III, 284.

Kramli, A., and Bruckner, V., acyl migrations. III. Use of ψ -nitrosites of phenolic ethers containing the propenyl group in the synthesis of aarylated β -hydroxylamino- and β amino-propanols, A., II, 189. See also Bruckner, V.

Kranjčevič, M. See Njegovan, V.

Krantz, J. C., jun., Carr, C. J., and Musser, R., quinhydrone electrode for tissues, A., III, 192. Preservative capacity of sodium formaldehydesulphoxylate in medicinal preparations, B., 285.

Carr, C. J., Musser, R., and Beck, F. F. pharmacology of pinacolone, A., III, 26.

Feldman, Maurice, Morrison, S., and Carr, C. J., pH of guinea-pig bile, A., III, 88.

See also Beck, F. F., and Dozois, K. P. Krantz, M. I., decomposition of apatites and phosphorites by nitric acid, B., 132. Kranz, F. H. See Nat. Aniline & Chem. Co. Kranz, W., desiccator for ashing flour, B.,

487.

See also Berliner, E.

Kranzfelder, A. L., and Sowa, F. J. [with Schueppert, K. J.], sulphonic and sulphuric esters as alkylating agents in liquid ammonia, A., II, 396.

Verbanc, J. J., and Sowa, F. J., cleavage of diphenyl ethers by sodium in liquid ammonia. II. meta-Substituted diphenyl ethers, A., II, 412.

Krapohl, E. See Heuser, G.

Krása, T., use of brown-coal preparations as fertilisers, B., 707.

Kraschevskaja, I. V. See Weichhertz, J. Krase, N. W., carbon monoxide as chemical raw material, B., 133.

Krasikov, S. E., Filippov, A. N., and Tscherniaev, I. I., absorption spectrum of ruthenium tetroxide, A., I, 110. See also Pschenitzin, N. K.

Krasilnikov, A. M., luminous effect at the cathode in emulsions, A., I, 362.

See also Gavrilov, N. I.

Krasitzki, I., adsorption of oil by hulls of

sunflower seeds, B., 806. Krasnikov, A. I., X-ray structure analysis, A., I, 49.

Krasnikov, A. I., Orechov, D. A., and Schulenina, A. D., influence of error of centring of samples on accuracy of determination of the constant in the Debye-Scherrer method, A., I, 201.

Krasnikov, S. N. See Makarov, S. Z.

Krasnova, V. S., determination of ammonia in sea-water, A., I, 148. Systematic analysis of cations without the use of hydrogen sulphide, A., I, 579.

Krasny-Ergen, W., two conducting insulated spheres in a homogeneous electric

field, A., I, 27. Krasov, V. M. See Zuverkalov, D. A. Krasovski, K., action of sea-water on Portland cement harbour constructions of

Black Sea ports, B., 915.

Krassin, A., electrodeless discharge, A., I,

Krassinsky, N., oxidation-reduction potential of cells of higher plants, A., III, 157. Krassnoff, D. See Levaditi, C.

Krassny, J., and Osten Chem. Corp., diaminopyridine o-hydroxybenzoic acid salts, (P.), B., 621.

Krasuski, K. A., and Movsum-Zade, M., action of phenylcarbimide on a-glycols and a-oxides, A., II, 56.

Kraszewski, W., and Kagan, M., pine

pitch, B., 516. Krat, V. N., isotherm of the system Na₂CO₃-K₂CO₃-H₂O at 0°, A., I, 82.

Kratinova, E. P., and Pochil, A. I., yeast (Torula pulcherrima) as a source of vitamin-D, A., III, 223.

Kratinova, K. G., Pochil, O. I., and Uschakova, A. S., enrichment of fodders in biologically valuable compounds, B., 184. Kratky, A., apparatus for carrying out

welding or coating of metals and chemical reactions electrically, (P.), B., 458.

Kratky, O., and Giacomello, G., crystal structure of paraffin-carbon choleic acids, A., I, II8.

and Krebs, G., application of convergent beam and oscillation photographs to layer lattice diagrams, A., I, 287.

and Mark, H., individuality of cellulose micelles, A., I, 460.

and Mnsil, A., dependence of osmotic pressure in solutions of high-molecular substances on concentration, A., I, 302. and Schossberger, F., micellar structure of rubber, A., I, 516.

See also Breuer, F. Kratz, B. See Wrede, K.

Kratz, E. M., and Marbo Products Corp., casting of transparent films, (P.), B., 128. Wilson, W. C., Pyroxylin Products, and

Marbo Products Corp., moistureproof transparent [wrapping] material, (P.), B., 658.

Kratz, H., jun. See Keefer, C. E. Kratz, L., purification of colloids by elec-

trodialysis, A., I, 460. Kratzert, J., and Kaempfe, F., electrical conductivity of chamotte bricks in relation to the iron oxide content, B., 550. Krauch, C. See Standard-I. G. Co.

Kraus, preservation of beer grain, B., 176. Kraus, A., [paint] vehicle problems, B., 369. Properties of plasticisers for nitrocellulose lacquers. VII., B., 467. [Pigment] binders containing nitrocellulose [emulsions], B., 811. Behaviour of resins in nitrocellulose lacquers. III., B., 945. Use of nitrocellulose in paint removers, B., I087. [Aqueous] nitrocellulose emulsions, B., 1238. Uses of collodion wool in the paper industry, B., 1322.

Kraus, C. A. See Rothrock, D. A., jun. Kraus, E. J., Brown, N. A., and Hamner, K. C., histological reactions of bean plants to indolylacetic acid, A., III, 241.

Kraus, F. See Haurowitz, F. Kraus, H. See Graubner, W.

Kraus, J., strophanthin, A., II, 486. Kraus, J. E. See Roberts, R. H.

Kraus, L. S., disposal of [sewage] sludge and gas by-products of sewage treatment, B., 1413.

Kraus, O., crystal lattice of heteropolyacids and their salts. III. Isomorphy and structural relations among the higher hydrates of heteropoly-compounds, A., I, 118. Crystallography and chemistry of the lower hydrates of heteropoly-acids, A., I, 288.

Kraus, P., recombination of ions in air at high pressures, A., I, 388.

Kraus, R., determination of small amounts of iron in mercury, B., 1066.

Krausche, K. K., and Gilbert, B. E., variations in fleshiness of tomato fruits as affected by manuring, B., 273.

Krause. See Kallauner, O

Krause, A. [with Krach, II.], amorphous and crystalline oxide hydrates and oxides. XXIX. Catalytic decomposition of hydrogen peroxide and the "active positions" of intermediate conditions occurring during dehydration of natural and artificial ferric hydroxides; crystallisation of a-Fe₂O₃, A., I, 89.

[with Szeliga, A., and Szczekocki, H.], amorphous and crystalline oxide hydrates and oxides. XXXV. A rontgenographically amorphous ferric oxide hydrate which does not combine with silver and has little activity, A., I, 577.

and Dobrzyńska, K., amorphous and crystalline oxide hydrates and oxides. XXXIV. Hypotonic external solution as cause of ageing of radiographically amorphous ferric hydroxide, A., I, 629.

and Ernst, Z., amorphous and crystalline oxide hydrates and oxides. XXXII. Oxidation of potassium iodide by hydrogen peroxide in presence of ferric

hydroxides, A., I, 252.

Ernst, Z., and Grześkowiak, T., amorphous and crystalline oxide hydrates and oxides. XXXVII. Acceleration of the air-oxidation of ferrous hydroxide by lead ions or lead hydroxide, and the effect of these in directing and stabilising the lattice, A., I, 624.

Gawrych, S., and Mizgajski, L., amorphous and crystalline oxide hydrates and oxides. XXX. A röntgenographically amorphous and ferromagnetic ferric hydroxide of definite composition which does not age; structure of ageing and non-ageing ferric hydroxides, Ă., I, 196.

and Gawrychowa, M., amorphous and crystalline oxide hydrates and oxides. XXXI. Peroxidase properties of amorphous ferric hydroxides; catalysed oxidation of formic acid by hydrogen

peroxide, A., I, 252.

and Jankowski, Z., amorphous and crystalline oxide hydrates and oxides. XXXIII. Amorphous ferric hydroxide as inorganic "oxidation ferment"; catalysed oxidation of acetic and other aliphatic acids by hydrogen peroxide and their combustion to carbon dioxide at 20°, A., I, 528.

Krause, A., and Kapitańczyk, K., colloidal gases. IV. Preparation and properties of colloidally dispersed gases and their significance in nature and industry,

A., I, 564. and Krzyzanski, S., amorphous and crystalline oxide hydrates and oxides. XXXVI. Is lithium hydroxide amphoteric? Heteropoly-bases, A., I, 575.

Krause, D. E. Sco Cross, H. C. Krause, D. R. Sce Lorig, C. H.

Krause, G. A., and Katadyn, Inc., preservation of milk, (P.), B., 84. Device for treating liquids, (P.), B., 1231.

See also Ges. für Linde's Eismachinen Akt.-Ges.

Krause, H., secrets of white enamel primers, B., 467.

Krause, Hugo, preparation of aluminium and its alloys for electroplating, B., 453. Colouring of iron in caustic soda solution with oxidising agents, B., 559. Chemical colouring of metals, B., 575. Faults in electroplating and metal colouring, B., 684. Electrolytic metal surface treatment, B., 1219. Drying of ceramic products, B., 1340. Nickel plating, B., 1358. Krause, J. See Gottlebe, P.

Krause, L., and Ellis, M., growth of Penicillium carmino-violaceum, Biourge, in media containing ethyl and other alcohols: production of pigment, A., III, 432.

Krause, O., and Jäkel, E., firing of ceramic products. VII.—XI. Steatite, B., 1340. Krause, R. See Paweck, H.

Krauss, F., persilicates of increased stability with high content of hydrogen peroxide or active oxygen, (P.), B., Ì35.

See also Gross, P.

Krauss, J., determination of potassium requirement of soil, B., 269.

Krauss, W., and Saracini, M., mechanism of reaction of nitric oxide with oxygen, chlorine, and bromine. III. Rate of formation of nitrosyl chloride, A., I, 312.

Krauss, W. E., Bethke, R. M., and Washburn, R. G., factors affecting the activability of milk with ultra-violet light, B.,

Krausse Ges.m.b.H., F. W., heat-insulating covering for pipes, (P.), B., 856.

Krausz, S. See Türy, P.
Kraut, H., and Schlottmann, F., use of
yeast as human food. I. Essential amino-acids of yeast, A., III, 432. and Tria, E., Northrop's crystalline

pepsin and Brücke's protein-free pepsin, A., III, 221.

Kraut, M., recovery of values from ore pulp, (P.), B., 53.

Krauth, W. See Eichholtz, F.
Krautwurst, F., benzol-recovery plant
according to the new Pintsch wash-oil process at Ratibor gasworks, B., 10.

Krauz, C., and Stěpánek, J., preparation of tetranitromethane, A., II, 43. Determination of tetranitromethane, A., II, 396.

Krauze, E. F., and Vorobieva, O. I., separation of vanadium pentoxide from vanadate solutions containing sexavalent chromium, A., I, 265. Reduction of quinquevalent vanadium compounds by hydrochloric acid, A., I, 367.

Kravtschenko, N. A., Selisski, J. P., and Tiulenev, V. N., X-ray examination of compression effects involved in turning

brass articles, B., 353.

Kraybill, H. R. See Thornton, S. F.Krchma, I. J. See Du Pont de Nemours & Co., E. I.

Krchma, L. C. Sco Mason, S., and Nevitt, H. G.

Krezil, F., recovery by activated carbon of iodine from waters containing it, B., 133. Catalytic oxidation of hydrogen sulphide in presence of active charcoal, B., 778.

Krcb, A. See Flügge, S.

Krebs, E. T., and Mather, W. H., treatment of oak wood for use in ageing spirituous liquors, (P.), B., 384. Krebs, G. See Kratky, O.

Krebs, H., excited atomic states investigated by the alternating illumination method, A., I, 1.

Krebs, H. A., dismutation of pyruvic acid in Gonococcus and Staphylococcus, A., III, 226. Intermediate metabolism of carbohydrates, A., III, 470.

and Johnson, William A., metabolism of ketonic acids in animal tissues, A., III, 212. Acetopyruvic acid (ay-diketovalerie acid) as an intermediate metabolite in animal tissues, A., III, 261. Rôle of citric acid in intermediate metabolism in animal tissues, A., III, 422.

Krebs, J. See Fink, H. Krebs, K. G. See Merz, K. W.

Krebs Pigment & Color Corporation, blended pigments, (P.), B., 1242.

See also Bichowsky, F. von, and Blumen- \circ fold, J.

Krefft, H., Larché, K., and Rössler, F. spectral energy distribution and light efficiency of the discharge in mercury vapour at high pressures, A., I, 54.

Rössler, F., and Rüttenauer, A., new radiation standard, A., I, 634. See also Gen. Electric Co.

Kreider, L. C. See Gehman, H., and Levene, P. A.

Kreidl, I., white clouded enamel, (P.), B., 140.

Krein, S. See Ivanov, K. I.

Kreisinger, H., significance to the consumer of sulphur in coal, B., 999.

Kreisler, A. von, coarsely crystalline ammonium sulphate, (P.), B., 35.

Kreitmair, H., constituents of the antiasthmatic, Epokan, A., III, 122.

Krejci-Graf, K. See Faber, W. Krekeler, H., determination of sulphur and chlorine in combustible materials, A., II, 313.

Kremann, R., and Fruhwirth, O., ultraviolet absorption and orientation polarisation of binary mixtures: allylthiocarbimide and piperidine, A., I, 72. Dielectric polarisation of binary mixtures and the relation to their constitution, A., I, 355.

Kremen, S., zinc sulphide, (P.), B., 238. Kremenevski, N., Larionov, J., and Seidel, A., structure of bands in the fluorescence spectrum of aqueous solutions of terbium salts, A., I, 493.

See also Seidel, A. Kremens, A. I. See Raiziss, C. W.

Kremer, C. B., constant-volume dialyser, A., I, 50. Alkanolamines. II. Reaction of the chloronitrobenzones with monoethanolamino, A., II, 455.

Kremer, G. See Oelsen, W.

Kremer, J_{\cdot} , treatment of plastic substances, P.), B., 945. Bakery product, (P.), B., 266. Kremser, A. See Standard Oil Co. of California.

Krendel, A. S., desulphurisation of industrial gases by arsonites under industrial conditions, B., 639.

Krenn, H., heat flow as cause of corresion, В., 143.

Křepelka, J.H., and Fanta, J., roduction of silver nitrate by arsine and its use for determining minimum amounts of arsenic, A., I, 325.

and Kočnar, M., revision of the at. wt. of arsenic. II. Synthesis and analysis of arsenio tribromide, A., I, 57.

Křepelka, V., and Štefec, R., synthesis of flavanthrene starting with benzene, A., II, 167.

Kreps, B., rapid determination of sulphur and ash in rubber by ignition in oxygen, В., 1377.

Kresalov, I. A. See Baranov, P. A. Kreschkov, A. P. See Michailenko, J. I.

Kreschtschanovski, N., electric welding of heat-resistant steels, B., 682.

Kress, C. B., report of 1935-6 Committee on testing pie flours, B., 385.

Kress, O., and Morgan, H., instrumentation studies. II. Definitions of properties of paper, B., 227.

and Williams, E. H., utilisation of kraft lime mud for preparation of bisulphite cooking liquor [for wood pulp manu-

facture], B., 769.

Krestinskaja, V. N., and Natanson, N. E., sensitising effect of small amounts of alkali on silicic acid sol, A., I, 304.

Krestinski, V. N., and Eschtschenko, A., structure of isoborneol. I. Now iso-meride of borneol, A., II, 253.

Nemilov, M., and Bardischev, I., structure of isoborneol. II. Velocity of esterification of isomeric dicyclic alcohols of the camphor, camphene, and fenchyl series, A., II, 253.
and Summ, N. I., action of formic

acid on tetraethylbutinediol, A., II, 225.

Krestovnikov, A. N., and Davidovskaja, E. A., kinetics of solution of zine oxide in sulphuric acid, A., I, 143.

and Feigina, E. I., heat capacity of tin sulphide at high temperatures, A., I, 124. Specific heat of copper, zinc, and lead sulphate at high temperatures, A., I, 124.

and Karetnikov, G. A., determination of heat capacity of chlorides of copper, lead, nickel, and iron at high temperatures, A., I, 21. Specific heat of cobalt chloride at high temperatures,

A., I, 230. Kretch, H. See Groetzinger, G. Kretchmar, L. L. Sco Tartar, H. V.

Kretov, A. E. See Melnikov, N. N. Kretovitsch, V. L., characteristics of the protein of rye-wheat hybrids, B., 78.

Kretsch, E. I., chlorination in presence of catalysts, A., I, 469.

See also Budnikov, P. P.

Kretsch, R. See Waldmann, H. Kretschmann, A. See Hahn, A.

Kretsehmann, E., spectral intensity of black-body radiation in the short-wave region, A., I, 386.

Kretschmayer, R., and Jesserer, H., biuret reaction. V. Biuret reaction of organic substances of low mol. wt., A., II, 478.AAA Samagaa

Sec also Lieben, F.

Kretz, T., coking or coal-distillation apparatus, (P.), B., 409.
Kretzchmer, F., measurement of gas pressures, B., 855.

Kreuchen, K. H., niobium as construction

material, B., 1354.

Kreulen, D. J. W., physical and chemical constants of gas oils with different cetene numbers, B., 751. Coefficient of static friction of different lubricating oils measured with the "Redgrove apparatus," B., 1007. See also Bemmel, P. M. van.

Kreutz, S., luminescence of minerals, A., I, 430.

Kreutzer, K., and Kast, W., calorimetric determinations of transition of the anisotropic liquid phase to the isotropic, A., I, 293.

Kreveld, A. van, objective measurements of graininess of photographic materials,

B., 622.

and Jurriëns, H. J., optical investigation of the latent image and the printout effect of photographic emulsions, A., I, 317, 574. Determination of minute absorptions of light, A., I, 330.

and Scheffer, J. C., change of sensitivity and latent image of some photographic emulsions in the course of time, B., Graininess of photographic 499. materials in objective absolute measure, B.,.731.

Kridel, A. H., Gibb's process for obtaining linen fibre, B., 422.

Krieg, W. See Peters, F.

Krieger, A. See Jander, W.
Krieger, K. A., and Kilpatrick, M.,
conductance of mixtures of strong

electrolytes, A., I, 619. Krieger, V. I., colorimetric determination

of blood-urea, A., III, 112. Kries, B., Bernoulli's theorem, A., I,

Kriggsman, C. See Horst, D. T. J. ter. Krilov, E. J. See Mokruschin, S. G.

Krilov. N. A., technique of electro-endosmotic measurements, B., 460.

Krilova, M.N. See Levi, P.J.

Krilova, N. N. See Smorodincev, I. A. Krimberg, R., and Vitants, V., acetylcarnitine, A., II, 488.

Krings, R., soft soaps and their manufacture, B., 151. Sulphite[-cellulose] waste lye powder as raw material for soaps and detergents, B., 805.

Kringstad, H. See Lunde, G. Krish, A. See Pomp, A.

Krishna, S. See Ghose, T. P., and

Puntambekar, S. V. Krishnamurthi, A., aspects of malting, B., 829. Non-protein-nitrogen of malt extracts, B., 1258.

See also Sastri, B. N. Krishnamurthy, Hie S. Seo Muknerjee,

Krishnamurthy, L. S. See Mukherjee, S.K.

Krishnamurthy, S. See Guha, P. C. Krishnamnrti, M. See Varma, P. S. Krishnamurti, S. G., spectrum of ionised tellurium, A., I, 272.

See also Rao, K. R.

Krishnan, B. G. See Aykroyd, W. R., and Sankaran, G.

Krishnan, K. S., and Ganguli, N., temperature : variation: of abnormal : unidirectional diamagnetism of graphite crystals, A., I, 174.

Krishnan, K. S., and Mookherji, A., magnetic anisotropy of CuSO₄,5H₂O in relation to its crystalline structure. I., A., I, 20. Magnetic anisotropy of Cs₂[CoCl₄], A., I, 229. Magnetic anisotropy of four-co-ordinated Co++ ions in crystals, A., I, 352.

See also Lonsdale, (Mrs.) K.

Krishnan, P. S. See Aiyar, S. S. Krishnan, R. S., dispersion of depolarisation of light-scattering in colloids. I. Gold sols. II. Silver sols. III. IV. Iodine, graphite, stearic acid, vanadium pentoxide, arsenic trisulphide, and ferric hydroxide sols. V. Colloidal dyes, A., I, 182, 409, 460, 514. X-Ray diffraction and electrolytic dissociation. I. Sulphuric acid and sulphates, A., 1, 302. Critical opalescence of liquid mixtures, A., I, 509. Reciprocity theorem in

colloid optics, A., I, 614. Krishnan, T. S. See Warth, F. J. Krishnaswamy, P. R., and Manjunath, B. L., roots of Aristolochia indica, Linn. III. Isolation of the alkaloid aristolochine, A., II, 265.

Kriss, A. E., anthocyanin from Actino-mycetes, A., III, 99.

Kriss, M., and Voris, Le R., derivation of factors for computing the gaseous exchange and heat production in the metabolism of proteins, A., III, 464.

Kristal, F. A., pumps and pumping, B.,

Kristallinskaja, R. J. Seo Sadikov, V. S. Kritchevsky, W., shaving cream, (P.), B., 1236.

Beckert, C. J., and Braver, J., rendering water-soluble compounds [dyes] soluble in organic solvents and substantially water-insoluble, (P.), B., 1026.

and Rit Products Corp., dye preparations, (P.), B., 654.

Kritschevski, I. L., and Rubinstein, P. L., antigenic nature of melanin, A., III,

Kritschevski, I. R., thermodynamics of infinitely dilute solutions in mixed solvents. I. Henry's coefficient for mixed solvents which are ideal solutions, A., I, 306. Solubility of gases in metals under pressure, A., I, 610. Henry's coefficient for a gas dissolved in a liquid with a high vapour pressure, A., I, 610. Fugacity of gas mixtures,

A., I, 618. and Kasarnovski, J. S., free energies of formation of sodium carbonate and hydrogen carbonate, A., I, 618.

Shavoronkov, N. M., and Epelbaum, V. A., solubility in water of carbon dioxide in mixtures with hydrogen at pressures of 30 kg. per sq. cm., A., I, 23.

Shavoronkov, N. M., and Tziklis, D. S., solubility of hydrogen, carbon monoxide, and their mixtures in methyl alcohol under pressure, A., I, 456.

Kritzmann, M. G. See Braunstein, A. E. Kriukov, A. A. See Kriukov, P. A. Kriukov, P. A., heat transmission in suspensions of mud (peat and mud baths), B.,

507.

and Kriukov, A. A., metallised glass electrodes, A., I, 582.

Kriukova, N. See Kursanov, A. L.

Kriukova, T. A., determination of yellow and red phosphorus and its oxidation products. A. I. 225

products, A., I, 325. Kriutschkov, N. I. See Postnikov, N. N.

Krivenko, I. N., determination of sulphur in metals by elimination as hydrogen sulphide, B., 575. Rapid determination of silicon in cast iron, alone or together with graphite, B., 1061. Krivobok, V. N., stainless steels, B., 1351.

Krivolutzkaja, N. S., determination of small amounts of copper, tin, and cadmium in presence of large amounts of zinc, by electrolysis with a constant cathode potential, A., I, 98.

Krivorutschko, N. A. See Kcrolkov, S. I. Krivoschlikov, N. F., and Platonov, M. S., colorimetric determination of niobium and tantalum, A., I, 265.

See also Platonov, M.S.

Křiženecký, J., vitamin-A and -D content of "premier jus" as compared with beef tallow and lard, B., 584.

and Lantuškin, C. M., relation between milk yield, fat content of milk, and

butter fat production, B., 611.
Krjagova, A. I. See Raspopina, A. K.
Krjatschkov, N. N. See Dumanski, A. V. Kröger, E., antigenic effect of purified typhoid autolysates giving negative protein reactions, A., III, 293.

Kroeger, J. W., Sowa, F. J., and Nieuwland, J. A., reactions of dihydroxyfluoboric

acid, A., I, 420.

See also McCusker, P. A.

Kröhne, H. See Wittig, G. Kröhnke, F., enol-betaines. V. Reactions with acid chlorides, A., II, 304.

[Enol-betaines; derivatives of 3:5-diketopiperidine], A., II, 516.
[with Schulze, A.], enol-betaines. IV.
New type, A., II, 209.
and Heffe, W., "acid fissions," particularly of certain pyridinium salts, A.,
II, 260. Enol-betaines. VI. Enolbetaines without pyridine ring, A., II, 422.

and Kübler, H., enol-betaines. III. Detection of reactive hydrogen atoms, A., II, 208. Coloured oximinobetaines, A., II, 304.

and Schmeiss, H., enol-betaines. VII. Explanation of colour reactions with picryl chloride and chloranil, A., II,

Kröner, E., age-hardening of aluminiummagnesium casting alloys containing Mg.Si, B., 576.

See also Kabel- & Metallwerke Neumeyer Akt.-Ges.

Kröner, W., industrial utilisation of potato sap, B., 282. Formation of black deposits on plant of potato-starch factories, B., 381.

and Falta, H., technical preparation of potato protein, B., 183.

and Kothe, H., discoloration of solution in starch saccharification, B., 1257.

and Steinhoff, G., determination of starch in frozen potatoes, B., 828. Kroenig, W. See Standard-I. G.

Kröper, H., behaviour of solutions of soaps and wetting agents towards semipermeable membranes, B., 1078.

Krogh, A., use of isotopes as indicators in biological research, A., III, 214. Active absorption of anions in the animal kingdom, A., III, 262. Animal membranes, A., III, 387.

and Ussing, H. H., exchange of hydrogen between the free water and the organio. substances in the living organism, A., III, 214.

See also Bang, O. A. A. W.

Krogh, A. E., controlling a "controlled atmosphere" [for steel heat treatment], B., 560.

Krogh, M. See Christensen, H.

Krohn, H., and Bärwolff, W., dependence of action of supplementary administration of cystine in metabolism during work on quality of the nutrition protein and its action in a protein-free diet, A., III, 128.

Krohn, P. L., and Zuckerman, S., water metabolism in relation to the menstrual cycle, A., III, 347. See also Fisher, R. B.

Krokowski, I. See Glixelli, S. Królikowski, J., apparatus for removal of liquid and indicator for characterisation of filtrate in P₂O₅ determination, A., I, 429.

Kroll, L., and Anderson, E. A., defects in wrought brass; is melting or pouring practice chiefly responsible? B., 569.

Kroll, W., malleable titanium and zirconium, A., I, 628. [Metal-]melting processes in high vacuum, B., 142. Alloys of deformable chromium, B., Deformable alloys of titanium, B., 1221. Krollpfeiffer, F., and Braun, E., mole-

cular compounds of 1-alkylpyridinium picrates with sodium picrate, A., II, Products of the coupling of diazocompounds with phenacylpyridinium salts, A., II, 114.

and Schneider, K., dyes from quinaldic and isoquinaldic acid, A., II, 351.

Krom, C. J., and Sprenkel, H. B. van der, can exposure in structure analysis [by X-rays] be shortened? A., I, 581. See also Gribnan, F. B., and Kolkmeijer, N.~H.

Krombholz, A. J., electrolytic etching method for revealing microstructure of electrodeposited nickel, A., I, 253.

Kronbach, E. W., and Una Welding, Inc., [steel] welding electrode, (P.), B., 799. Kroneman, W. F., testing liquid insecticides against crawling insects, B., 846.

Kronenberg, M. H., Setterlind, A. N., and McClure. C. H., dust determinations by the impinger method, B., 733.

Kronenberg, P., mist-producing apparatus, (P.), B., 635.

Kronfeld, P. C., and Lin, C. K., effect of cocaine on protein content of recently produced aqueous humour, A., III, 179.

Kronhaus, A. N., effect of X-rays on cuprous oxide barrier-layer photo-cells in vacuo, A., I, 114.

Kronholm, G., and Välkkilä, Y., carbon dioxide content of Finnish cowstalls, B., 820.

Kronig, R. de L., relativistically invariant formulation of the neutrino theory of light, A., I, 60. Nucleus Be, A., I, 161. See also Gorter, C. J.

Kroning, E. See Meerwein, H. Kronman, J. See Lachs, H.

Kronrod, A. J. See Rubinstein, A. M. Kronstad, H., [rotary cement] kiln, etc.,

(P.), B., 1057. Kroon, D. B., [apparatus for] potential measurements in oxido-reduction mix-

tures, A., I, 267. Kropotov, V. I., preparing allyl alcohol in the plants of "Metil," B., 20. Preparing

pure acetone from crude acetone, B., 20. Krosta, V., precision castings from metals and alloys of high m.p., (P.), B., 692.

Krotov, I. V. See Ageev, N. V. Kroupa, A. See Franke, A. Krouse, R. See Burge, W. E., Outhouse, J., and Wickwire, G. C.

Krouze, N. K. Sce Asimov, G. J. Kruber, O., new constituents of coal-tar pitch, A., II, 385.

Krügel, C., and Dreyspring, C., Kotka phosphate, B., 820.

Krügel, K., effect of temperature on strength of rock-salt crystals, A., I, 70.

Krueger, A. P., and Baldwin, D. M., reversible inactivation of bacteriophage with safranine, A., III, 147.

and Scribner, E. J., effect of $p_{\rm H}$ on heat-inactivation of bacteriophage, A., III, 72.

See also Scribner, E. J.

Krüger, D., structure of wood and cellulose fibres, B., 124. Technical viscosity measurements, B., 196. Properties and characterisation of cellulosic materials, B., 1319.

Krüger, F., freeing of liquids and fused masses from gases by means of ordinary sound waves, (P.), B., 402.

Krüger, H. See Kopfermann, H. Krüger, L., introduction of admixtures during mixing of concrete, B., 40. Hot

cement, B., 40. Krüger, W., Wimmer, G., and Lüdecke, H. [with Ringleben, C., Vogt, O., Unverdorben, O., and Grimm, J.], spacing in sugar beet cultivation. II., B., 169.

Krueger, W. C., and Endowment Foundation, soil pasteurisation, (P.), B., 715. See also Bender, C. B.

Kruger, F., and Brasack, F., natural magnetism of crystals, A., I, 555.

Kruger, P. G., and Pattin, H. S., extreme ultra-violet spectra of scandium vi and scandium vii and other elements isoelectronic with phosphorus 1 and sulphur 1, A., I, 589.

and Phillips, L. W., spectra of K III, Ca IV, and Sc v, and their relation to the spectra of other ions in the isoelectronic sequence Cl I to Mn IX, A. I, 436. Deep terms in the spectra of

Sc viii and Sc ix, A., I, 485. and Weissberg, S. G., extreme ultra-violet series in Cr vi, Mn vii, and Fe viii, A., I, 539. Series spectra in Mn vii and Fe viii, A., I, 539.

Weissberg, S. G., and Phillips, L. W. spectra of Se IV, Ti V, Mn VIII, and Fe ix in the isoelectronic sequence A 1 to Fe 1x, A., I, 436.

See also Weissberg, S. G. Kruglaja, N. B. See Petrov, G.

Kruglov, A. A., bromination of acetylenic glycols, A., II, 29.

Kruilov, K. I., investigation of structure of rubber by electron diffraction, A., I, 226. Kruis, A., variation with concentration of

apparent molecular volume of certain strong electrolytes, A., I, 77. Interpretation of variation with concentration of equivalent refraction of strong electrolytes, A., I, 77.

and Clusius, K., visual demonstration of transformations of condensed hydrogen sulphide, H₂S and D₂S, A., I, 450.

and Geffcken, W., equivalent dispersion of strong electrolytes in solution. I. Variation with concentration of equivalent refraction in the visible. II. Physical interpretation of observed effects. III. Variation with concentration of equivalent dispersion in ultra-violet, A., I, 77.
Popp, L., and Clusius, K., transitions in

solid hydrides and deuterides, A., I, 505. Sec also Geffcken, W.

Kruisheer, C. C. See Kniphorst, L. C. E. Kruithof, A. A., and Druyvesteyn, M. J. Townsend ionisation coefficient and some elementary processes in neon with small admixtures of argon, A., I,

and Penning, F. M., determination of the Townsend ionisation coefficient a for mixtures of neon and argon, A., I, 387.

Kruithof, A. M. See Haringhuizen, P. J. Krukovsky, V. N., and Sharp, P. F., effect of lipolysis on churnability of cream obtained from milk of cows in advanced lactation, B., 1122.

Krumbhaar, W., British paint fragments, B., 155. Shellac substitutes, (P.), B., 158. Practical aspects of surface chemistry, B., 260. Classification of synthetic resins, B., 260. Reactivity of straight phenolic resins, B., 260.

Krumbholz, G., conservation of nutritive value of fruit in preparation of un-

fermented fruit juices, B., 724. Krumholz, E. See Krumholz, P.

Krumholz, P., objective photometry, A., I,

and Krumholz, E., diphenylcarbazone, A., II, 408.

and Watzek, H., auto-oxidation of diphenylcarbazone, A., II, 408.

Krupa, V., improvement of, inter alia, the keeping qualities of photographic films, (P.), B., 1276.

Krupenio, N. S., determination of small amounts of antimony by the method of internal electrolysis, A., I, 265. Volumetric determination of nickel, A., I, 478. Krupitzkaja, L. Seo Zautschenko, P. Krupkin, A. I. See Raines, M. M.

Krnpkowski, A., and Balicki, S., oxidation of liquid metals at high temperatures, B., 1355.

and Jaszczurowski, J., rate of oxidation of metals at elevated temperatures; nickel, copper, iron, and brass, B., 923.

Krupp Akt.-Ges., F., cleaning of producer gas, etc., (P.), B., 14. Lined metal containers, (P.), B., 53. Apparatus for heating bulk material such as coal, (P.), B., 97, 301. Purification of producer gas and similar gases, (P.), B., 208. Metallurgical cement, (P.), B., 244. Sintering finely-powdered materials, (P.), B., 244. Gasification of solid fuels in gas producers, (P.), B., 410. Gas producers, (P.), B., 410. Corrosion-resistant [ferro-] alloys, (P.), B., 690. Sintered hard metal alloys, (P.), B., 934.

Krupp Grusonwerk Akt.-Ges., F., separation of iron from iron-containing substances [ores], (P.), B., 454. Working up of ores and metallurgical products containing iron and nickel, (P.), B.,

1225.

See also Johannsen, F. Krns, A. See Enlenstein, F. Kruschevski, B. See Etinburg, E.

Krusius, F. E., and Simola, P. E., influence of various avitaminoses on lactic acid metabolism, A., III, 306.

Krustinsons, J., thermal dissociation of lead peroxide. II., A., I, 136.

Kruta, E. See Dieterle, H. Krutter, H. M. See Manning, M. F.

Kruyt, H. R., development of ideas in colloid chemistry, A., I, 78. and Gils, G. E. van, electrophoretic study

of silver iodide sol, A., I, 132. and Nierstrasz, C. A., mixtures of simi-

larly charged sols, A., I, 131.

Kruyt, II. R., and Oosterman, J., flow potentials on platinum, A., I, 415.

See also Denekamp, P. J., Gils, G. E. van, and Gribnau, F. B.

Krzemieniewski, S., and Kovats, J., influence of iron and molybdenum on nitrogen fixation by Azotobacter chroococcum, Beij., A., III, 272.

Krzyżański, S., potassium ferrites, A., I, 422.

See also Krause, A.

Ksanda, C.J. See Tunell, G. Ksenofontova, T. See Orlov, I.

Ksir, K. See Löbl, K.

Ku, P. S., direct determination of elæostearic acid in tung oil, B., 463. Kuan, H. T. See Chien, S. L.

Kubaschewski, O. See Seith, W.

Kubelka, P., thixotropic preparations containing copper oxychloride, (P.), B.,

Kubelka, V., theory of swelling measurements with hide powder and gelatin, B., 816.

and Němec, V., analytical determination of nitrogen, fat, and moisture in leather, B., 162. Determination of water absorption of leather, B., 267, 952.

Němec, V., and Zuravlev, S., effect of vegetable-tanned leathers on metallic iron. II. Effect of iron pulleys on curried leather belting, B., 475.

and Schneller, Z., protective action of stuffing with fish oil on vegetable [-tanned] leather by the hydrothermal test, B., 1094.

Kubessa, F., effect of castration and low external temperature on blood-sugar in cockerels, A., III, 195.

Kubias, J., determination of ethyl alcohol and ethyl ether in mixtures, B., 1016.

Knbiczek, G., extraction apparatus, A., I,

See also Späth, E.

Kubiena, W., structure of coherent soil masses, B., 269.

Knbfk, J. See Tomiček, O.

Kubischkina, T. D. See Dimov, A. M. Kubli, U., papaverine and Fröhde's reagent, A., II, 125.

See also Karrer, W.

Kublun, H. See Hessenland, M. Kubo, H., physiology of Azotobacter. Respiration of A. chroococcum with special reference to N₂ assimilation and

CO inhibition, A., III, 486.

Kubo, I. See Sawai, I. Kubo, Masaji, dielectric constants of gases and vapours. VI.-VIII., A., I, 12, 65, 396.

Morino, Y., and Mizushima, S., Raman effect and dipole moment in relation to free rotation. VIII. Molecular structure of carbonic esters, A., I, 445.

See also Higasi, K., and Mizushima, S. Kubo, Masanori. See Kondo, K.

Kubo, T. See Go, Y.

Kubokawa, M., decomposition of methane on the surface of platinum. I. and II., A., I, 573.

Kubota, B. See Iwadare, K.
Kubota, H. See Ishida, Y.
Kubowitz, F., constitution of potatooxidase, A., III, 427. Heavy metalprotein and pyridine-protein complexes as the components of alcohol dehydrogenase sensitive to hydrocyanic acid and carbon monoxide, A., III, 480.

Kučera, C., influence of radioactive waters on resistance of animals to chloral hydrate narcosis, A., III, 175.

Kucera, J. J. See Dahlberg, A. C.

Kuchel, C. C., influence of temperature on drying of [frozen] fish in cold store, B., 1263.

See also Reay, G. A.

Kuczyński, H., products of bromination of d-tartaric acid di-p-toluidide, A., II,

and Sucharda, E., reactions of 5-, 6-, 7and 8-nitroquinoline with glycerol and hydrochloric acid, A., II, 166.

Sucharda, E., and Surmiński, A., reactions of 1- and 2-nitronaphthalene and 1:5-dinitronaphthalene with glycerol and hydrochloric acid, A., II, 166.

Kuczyński, T. See Grzymek, J. Kuder, M. L., colorimeter apparatus, (P.), B., 802.

See also Armstrong, E. L.

Kudra, O. K., black cathodic deposits, A., I, 369.

See also Ivanov, K.N., and Plotnikov, V.A.Kudrjashev, B., production of sex hormone in absence of vitamin-E, A., III, 320. Rôle of vitamin-A in synthesis of the male sex hormone, A., III, 324. Synthesis of folliculin in the organism of females with avitaminosis-A, A., III, 491.

Kudrjavcev, A. I. See Juriev, J. K.Kudszus, H. See Butenandt, A.

Kübler, H. See Kröhnke, F.

Küch, F., surface protection by rhodium plating, B., 247.

Küchler, K. See Kaufmann, H. P. Küchler, L., and Lambert, J. D., thermal decomposition of dioxan, A., I, 622. Kühl, Hans, sea-water cements, B., 675.

Kühl, Hugo, have ultra-violet rays significance for milling? B., 78. Bread grain and flour in transport, B., 178. Breakingdown of flours by enzymic, physical, and chemical means, B., 178. Odour of bread cereals, B., 280. Keeping quality of cheese curd, B., 281. Composition and nutritive value of cereal germ; nutritive flours, B., 487. Rapid determination of nitrogen, B., 721. Action of free phosphoric acid and of potassium

phosphates on starch, B., 1115. Kühlwein, F. L. See Hoffmann, H., and Jenkner, A.

Kühn, H., and Stein, O., condensations of indoles with aldehydes and secondary amines. I. New synthesis of gramine, A., II, 216.

See also Borsche, W. Kühn, P., production of steel in the Thomas converter, (P.), B., 1070.

Kühn, W., inflammability of cork and wood dust, B., 655.

Kühn, Walther, natural colour photographs and printing inks, B., 394.

Kühne, H. See Steinbrecher, H. Kühner, A. See Widenbauer, F.

Kühni, F. See under Kühni, H. & F.

Kühni, H. See under Kühni, H. & F. Kühni, H. & F., partitions for rectifying, washing, and reaction columns, (P.), B., 1148.

Kükenthal, H. See Meisenburg, K.

Küng, A., determination of cuprammonium viscosity of cellulose by the American standard method (TAPPI standards), B., 1033. TAPPI standard method for determining the cuprammonium viscosity of pulp, B., 1321.

Künkele, F., blood-alcohol determination, A., III, 291.

Küntzel, A., theory of mineral tannage. VI. Cause of leather-like nature of dried chrome-tanned hide, B., 68. Reactions between tanning agents and the protein structure of animal hide, B., 704.

and Riess, C., theory of mineral tannage. VII. Cause of the resistance of chrometanned leather to boiling water. VIII. Theory of chrome tannage, B., 68.

Vago, G., and Seitz, A., structure of the hair roots of short and long hairs, B.,

Kuentzel, W. E. See Standard Oil Co.

Küpferle, G. See Seith, W.
Kürschner, E. R. See Hüttig, G. F.
Kürschner, K., lignin problem, B., 655.
[with Schindler, F.], acidity of firmould nitrohumin, B., 225.

Kürti, N., Lainé, P., and Simon, F., ferromagnetism of ammonium iron alum, A., I, 229. Thermodynamic temperature scale below 1° abs., A., I. 231.

Küssner, W., investigations on ergot, B.,

Küster, A. See Eggert, J.

Küstner, H., and Trübestein, H., analysis of Röntgen-ray absorption into photo-absorption and Compton scattering, A., I, 208.

Kuettel, G. M., and Du Pont Viscoloid Co., treatment of resinous products, (P.), B.,

Kufferath, A., methods and devices for p_H measurement as aids to colloid chemistry, A., I, 240. Innovations in microscopy, A., I, 428. Progress in $p_{\rm H}$ -value determination, B., 149. Spray-drying method for milk, B., 833. Photomicrographic equipment for investigating corrosion [of metals], B., 929. Drum sieves, (P.), B., 1288.

Kuffner, F. See Spath, E. Kugel, A. V., determination of bismuth in brass, copper, and zinc, B., 683. Determination of sulphur in cast iron by .combustion in air, B., 1061.

Kugener, E. See Neunkircher Eisenwerk

Akt.-Ges. vorm Gebr. Stumm. Kuhbier, F. See Traube, W.

Kuhlberg, L. See under Kulberg, L. Kuhlman, A. F. See Nevens, W. B. Kuhlman, A. H., Weaver, E., and Gallup,

W. D., cottonseed meal injury [to cattle] due to vitamin deficiency, B., 1403.

See also Gallup, W. D., and Keith, K. I. Kuhlmann, A. G., individuality of gliadin, A., III, 340.

and Golossova, O. N., bound water in bread making, B., 280. Solubility of flour, dough, and bread, B., 280. Application of physico-chemical analysis to examination of bakery products, B., 609.

Kuhlmann, G. See Sonntag, F.
Kuhlmeyer, E. J., production of copper
from brass and gunmetal scrap, B.,

Kuhn, Raschig rings in the sugar industry, B., 828.

Kuhn, A., preparation of biological

medicaments, B., 391. and Schäfer, G., occurrence and distribution of saponins in herb drugs, A., III, 447.

Kuhn, A., and Schäfer, G., capillary distribution of plant constituents. IV. and V. Tinctures from leaves and flowers. Formation and synthesis of the capillary strip, B., 86, 286. Determination of salicin and populin in varieties of Salix, B., 1406. Detection and determination of taxine alkaloids in Taxus baccata preparations, B., 1407.

Kuhn, A. B. See Abernethy, J. W. Kuhn, E. See Kallmann, H.

Kuhn, H., pressure broadening of spectral lines and van der Waals forces. I. Influence of argon on mercury resonance line. II. Continuous broadening and discrete bands in pure mercury vapour, A., I, 272. Pressure shift of spectral lines, A., I, 486.

See also Jackson, D. A.

Kuhn, J. See Candea, C. Kuhn, R., synthesis of higher polyenes, A., II, 395. Active agents in nature, A., 111, 187.

and Brydowna, W., action of diazomethane on amino-acids, A., II, 327. and Cook, A. H., lumazines and allox-

azines, A., II, 263. and Desnuelle, P., amino-acids of the yellow enzyme, A., II, 448.

Desnuelle, P., and Weygand, F., specificity of lactoflavin; significance of the position of the methyl groups, A., II, 352.

and Grundmann, C., synthesis of dccrocetin [Agyenile-tetradecaheptaene-a'ζ-dicarboxylic acid], A., II, 321. Constitution of lycopene, A., II, 438. Synthesis of Hildebrandt's acid; synthesis of methylated polyenedicarboxylic acids, A., II, 440.

Grundmann, C., and Trischmann, H., synthesis of steario acid, A., II,

366. Köhler, F., and Köhler, L., biological oxidation of highly unsaturated fatty acids; preparation of polyenedi-

carboxylic acids, A., II, 321. and Morris, C. J. U. R., synthesis of vitamin-A, A., II, 288.

and Rudy, H., lactoflavin as co-enzyme; active substance and carrier, A., III,

31. and Ströbele, R., o-nitroanilinoglucosides, A., II, 231. Synthesis of flavinglucosides, A., II, 231. Verdochloro-, and rhodo-flavins, A., II,

Vetter, H., and Desnuelle, P., homologues of o-nitrophenylhydroxylamine, A., II, 334.

Vetter, H., and Rzeppa, H. W., specificity of lactoflavin; replacement of the methyl groups by the tetrainethylene and trimethylene ring, A., II, 352.

and Wallenfels, K., k-phenylundecapentaenal and ϕ -phenylpentadecaheptaenal,

A., II, 342. and Weygand, F., Amadori transformation, A., II, 233.

Kuhn, W. See Jnza, R.

Kuhnke, A., and Jantzon, H., yields of crude and digestible nutrients from marrow-stemmed kale, beet, and swedes, B., 1401.

Kuhr, E. See Windaus, A.

Kuijper, J., and Wiersum, L. K., occurrence and transport of a substance causing flowering in soya bean (Glycine max., L.), A., III, 81.

Kuiper, H. See Uhlenbeck, G. E.

Kuisel, H. F., water softening by permutit process with reference to hygienic conditions of household use of softened water, B., 504.

Kuizenga, M. H., effect of cortin on high blood-non-protein-nitrogen of partially nephrectomised rabbits, A., III, 436. See also Cartland, G. F.

Kukanov, L. I., damping of metals, B., 1068.

See also Davidenkov, N. N.

Kukuschkin, S. I., and Belov, K. A., separation of naphthalene and anthracene from vapours. I., B., 324.

Kulakov, N. N., viscosity and plasticity of disperse systems. XI. Comparison of three methods of determination of the plastic-viscous properties of peat, B., 999.

Kulberg, L., highly sensitive drop reaction of cerium, A., I, 47. Detection and determination of traces of gold in presence of copper, A., I, 200. Tetramethyl-p-phenylenediamine as a reagent for detection of traces of certain cations of the fourth analytical group, A., I, 376. Detection of traces of permanganate, persulphate, dichromate, and ferricyanide, present to-gether, A., I, 532. Connexion between complex formation and redox reactions. I., A., II, 239.

and Lirtzman, R., application of organic redox systems to quantitative analysis. III. Colorimetric determination of

traces of copper, A., I, 98. and Serebriani, S. B., application of organic redox systems to quantitative analysis. IV. Mechanism of reaction of silver salts with benzidine, and a sensitivo new reaction for silver, A., I, 97.

Kulehar, G. V. See Barnett, C. W., and Pillsbury, D. M.

Kulesza, S. See Broniewski, W.

Kuliaschev, J. V. See Berkovitsch, V. L. Kulitans, P., influence of liming on yields from sandy soils and peat-sand soils in Ramava, 1926—30, B., 1388.

Kulka, M., and Sandin, R. B., binary systems of fatty acids, A., I, 464. See also Sandin, R. B.

Kulkarni, S. See Joshi, S. S.

Kulkes, A. A. See Demidenko, T. T.

Kullgren, C., extraction of ligninsulphonic acid from sulphite-cellulose by means of methyl alcohol, B., 768.

Kumagai, G. S., sodium glutamate, (P.), B., 1022.

Kume, T., vapour pressures of concentrated aqueous solutions, A., I, 406.

Kumichel, W., and Amer. Bemberg Corp., production of cuprammonium silk by stretch-spinning process, (P.), B., 895. See also Ostermann, IV.

Kumler, R. W., use of wax emulsions in surface-sizing paper and board, B., 427. Kummer, G. A., and New Jersey Zinc Co., lithopone, (P.), B., 65.

Kun, H. See Steinach, E.

Kuna, M., and Levene, P. A., configurative relationship of mandelic acid to lactic acid, A., II, 192.

See also Bartlett, P. D., and Levene, P. A. Kunasheva, C. G. See Vernadsky, W. I. Kunc, J. See Standard Oil Development Co. Kundargi, J. A., Chakradeo, Y. M., and Shah, S. V., action of thionyl chloride on esters of salicylic acid in presence of catalysts, A., II, 17.

Kunerth, B. L. See Whitnah, C. H. Kung, K., carbonisation of lignite in presence and absence of steam, B., 1000.

Kung, L. C., and Yeh, H. L., calcium and phosphorus balances of Chinese college women, A., III, 472. See also Benedict, F. G.

Kung, W. C. See Lee, S. T.
Kunin, T. I. See Korobov, N. N., and
Postnikov, V. F.

Kunisch, G. See Fink, H., and Kolbach, P. Kunishige, T., partial fission of proteins. II. Gliadin, A., III, 446.

Kunisho, K., action of veratrine, pierotoxin, and cocaine on the rabbit uterus in situ, A., III, 27. [Effect of] combinations of quinine with other uterine tonics on the human uterus, A., III, 27.

Kunisue, H. See Namikawa, T. Kunitz, W., magmatic associations. III. Rôle of titanium and zirconium in rockforming silicates, A., I, 206.

Kunkel, L. O., heat treatments for cure of yellows and other virus diseases of

peach, B., 1106. Kunlin, J. See Fontès, G. Kunnerth, B. L. See Leuschen, M. E. Kuno, H., petrology of Alaid volcano, N. Kurile, A., I, 432.

Kunos, \hat{F} . See Millner, T. Kunst, H. See Kolkmeijer, N. H. Kunstadter, R. H. See Hess, J. H.

Kunstdünger - Patent - Verwertungs - Akt.-Ges., separation of fluorine and aluminium from solutions obtained by treatment of raw phosphate with acids, (P.), B., 1336.

Kuntke, A. See Bouwers, A.

Kuntze, W., influence of state of stress produced by shape of specimen on endurance limit in alternate-bending tests, B., 928.

and Lubimoff, W., regular dependence of fatigue limit [of steels] in alternating-bending tests on size of specimen and shape of notch, B., 561. 6.5

Kunz, A. \hat{H} ., and Spulnik, J., standard liquids for microscopical determination of refractive index, A., I, 49.

Kunz, E. C. See Carpenter, M. S., and Maywald, F. J.

Kunz, J., and LaBaw, R. G., optical rotatory power of turbid solutions in an electric field, A., I, 499.

Kunz, W., and Wüldicke, E., resin components of galbanum. I., A., II, 159.

Kunze, E., light- and air-resistance of [pigment and dye] colours, B., 63.
Preparation of Prussian, Milori, and Paris blues, B., 944.

Kunze, H. See Fingerling, G.

Kunze, R., gravimetric micro-determination of acetoin and diacetyl, A., II, 177. Kunzle, C., [making of] chocolates [with underside projections], (P.), B., 496.

Kuper, J. B. H., vacuum gauge for leak hunting, A., I, 333. Kupfer, C. See Bialaszcwicz, K.

Kupffer, M. See Stackelberg, M. von. Bare & Kuprianova, A. I. See Rabovski, G. V.

Kuptschinski, P., and Jasnui, A., use of liquid resin (tall oil) in soap-making, B., 585.

Kuptzova, A. M. See Federov, D. A. Kuraš. See Kallauner, O.

Kurbatov, L. M., radioactivity of bituminous shale. II., A., 1, 51. Radioactivity of bottom sediments. I. Radioactivity of ferromanganeso formations in seas and lakes of the U.S.S.R., A., I, 103.

Kurbatov, V. J., solution of cellulose compounds; structure of colloidal solutions,

B., 1319. Kurbatova, V. S., and Schakin, A. N. sulphite fermentation under conditions of repeated utilisation of yeast, A., III, 143.

Kurdjumov, G., laws of phase transformations in eutectoidal alloys, A., I, 559. and Stelletki, T., transformations in copper-aluminium eutectoid alloys. I. Intermediate stages in the hypercutectoid alloys, A., I, 297.

See also Archarov, V.I., and Sheldak, M.P.

Kureishy, M. A. See Desai, R. D. Kurenniemi, T., and Tommila, E., electrolytic oxidation of alcohols and aldehydes in alkaline solution, A., II, 44.

Kurennova, A. M. See Tzuipkina, M. N. Kurgatnikov, M. M. See Ivanov, N. N. Kurie, F. N. D., and Livingood, J. J. computing energy values associated with a fork in a cloud chamber caused by disintegration of a nucleus by a neutron, A., I, 536.

See also Richardson, J. R.

Kurihara, K., phloridzin. VIII. Effect on sugar excretion in rabbits, A., III, 130.

Kurin, N. P., equilibria and kinetics of ammonia synthesis at ultra-high pressures, B., 902. Activity of the Casale catalyst at atmospheric pressure, B., 1042.

Kuriudin, K. S., Voevodova, V. I., and Rasskazova, T. A., preparation of alkylbenzenes from benzene and olefinic hydrocarbons of cracking benzine in presence of anhydrous ferric chloride, B.,

Kurnakov, N. S., Mendeléev's "singular points" in theory of solutions and topology of the chemical diagram, A., I. 406.

Borkij, G. B., and Lepeschkov, I. N., kainite and polyhalite in the salt deposits of the Soviet Union, A., I, 484. and Egorov, V. S., dispersion-type of solid solutions in the system NiCl₂-

NH, Cl-H₂O, A., I, 308, and Kuznetzov, V. G., metastable hydrates of magnesium sulphate in the ternary system: magnesium chloridemagnesium sulphate-water, A., I, 618.

Lushnaja, N. P., and Kuznetzov, V. G., nature and structure of micro-disperse crystals in the system NH₄Cl-CoCl₂-H₂O, A., I, 618.

and Micheeva, V. I., β - and γ -phases of the system Al-Mg, A., I, 508.

Nikolaev, A. V., and Tschelischtscheva, A. G., specific heat and hardness of natural borates and their products of heating. I. and II., A., I, 517. Hydration heat and exothermic borate transformation for invoite [2CaO,3B₂O₃,13H₂O], A., I, 517.

and Schternin, E. B., determination of the composition of binary liquid systems examined by physico-chemical analysis; stannic bromide-esters, A.,

I, 295.

and Voskresenskaja, N. K., calorimetry in binary liquid systems, A., I, 296. Anomalous solid solutions in the system NH₄Cl-MnCl₂-H₂O, A., I, 618.

Kuroda, A., [physiological] action of phydroxybenzylguanidine. IV. Relation of thyroid gland, spleen, and iodine to blood-coagulating action and detoxication of p-hydroxybenzylguanidine. V. Relation of pituitary, pancreas, and adrenal, A., III, 26. Kuroda, C., and Wada, M., constitution of shikonin; syntheses of isohexylnaphthazarin and related compounds; syntheses of isohexylnaphthapurpurin and related compounds, A., II, 66, 344.

Kuroda, K., micro-determination of water in biological fluids, A., III, 192.

and Ebina, R., water content of blood of species of fish, A., III, 114. Change in water content of guinea-pig's blood during growth, A., III, I14. Water content of blood of species of birds, A., III, 114.

Ryô, T., and Ebina, R., content of water in blood of 1069 normal adult men, A., III, 196.

Kuroda, Z. See Matsui, M.

Kurosawa, T., conditions of test of evaporation loss and relations between loss and flash point of petroleum oils. I., B., 107, 203, 751...

Kuroschkina, N. See Zinoviev, A. Kurotschkin, T. J. See Lin, F. C. Kurotschkina, E. A. See Apuschkin, K. K.

Kurova, M., chemical influences of bacteria on blood-pigments, A., III, 397.

Kurowski, J. See Tislowitz, R.

Kursanov, A. L., application of the vacuum-infiltration method to measurement of synthetic and hydrolytic activity of invertase in living plant tissue, A., III, 141. Reversible action of invertase in plant cells, and rôle of structural protoplasmic elements, A.,

and Kriukova, N., rate of penetration of sugars introduced by infiltration to the sites of enzymic transformation in cells, A., III, 430.

and Manskaja, S., photosynthesis and carbohydrate changes in the banana plant, connected with the peculiar leaf structure, A., III, 501.

Kursanov, D. N., and Goriatschev, V. S., parachors of polycyclic compounds. III., A., I, 446.

Knrtschatov, B. V., electrical properties of isomorphic mixtures of Rochelle salt! A.,

Knrtschatov, I., and Schtschepkin, G., selective absorption of neutrons, A., I,

Kurtz, L. J., and Voano, V. G., thermostat with prolonged automatic regulation of low temperatures, A., I, 330.

Kurtz, P. See Braun, J. von.

Kurtz, S. S., jun., and Atlantic Refining Co., hydrocarbon oil treatment, (P.), B., 16. and Headington, C. E., analysis of light petroleum fractions, B., 315.

and Ward, A. L., refractivity intercept and specific refraction equation of Newton. I. Development of the rofractivity intercept and comparison with specific refraction equations, A., I, 13.

See also Wingfoot Corp.

Kuryla, M. H. See Bryan, R. R. Kurz, H., chemistry of linseed stand oils.

II., B., 938. Catalytic ester exchange of fatty oils by alcoholic potash, B., 941. Kurz, P. F. See Milas, N. A. Kurz, T. See Redlich, O.

Kurzke, H., normal cathode [voltage] drop at single-crystal surfaces with different orientations. I., A., I, 208.

Kurzrok, R. See Gregerson, H. J. Kurzweil, R. See Oszacki, A. Knsaka, T. See Asahina, Y. Kusakov, M. See Derjaguin, B.

Kusakov, M. M., Kuznetzova, V. S., and Semenchko, N. A., physics of surface phenomena in petroleum technology, B.,

Kusch, P., and Loomis, F. W., magnetic rotation spectra of polyatomic molecules in the ultra-violet, A., I, 551.

Kushel, H., adhesive paper, (P.), B., 537. Kusin. See under Kuzin.

Kusmarzev, P. G. See Slavinski, M. P. Kussmann, A., expansion of platinum-iron alloys, A., I, 127.

and Schulze, A., definition of the Curie point, A., I, 120.

See also Ebert, H., and Steinhaus, W. Kuster, E., and Meixner, H., tables and calculations for air conditioning, B., 396. Kutani, N. See Kaku, T.

Kuten, P. S., crystalline masses from Tschardzhui loesses for production of paving blocks, B., 786.

Kutepow, A., respiration process in pure cultures of higher plants, A., III, 159.

Kuthy, A. von, changes in content of vitamin- B_1 and -C in germinating cereal grains, A., III, 325.

and Baskay-Toth, B., chemical changes during fermentation of dung, B., 955. Kutscher, S., anthracene: mosquito larvi-

cide, B., 849. Kutscherenko, N. A., influence of oxidation on coking property of bituminous coals, B., 860.

Kutzakov, F. E. See Bezugli, D. V. Kutzelnigg, A., fluorophors of the layeredlattice type and their properties, A., I, 350. Oxidation catalysis. Catalytic oxidation of dissolved substances at the surface of powdered contact materials, A., I, 368. Behaviour of "lanital" in dry microdistillation, B., 330. Micro-dry-distillation, and its application to identification of lanital fibre, B., 655. Detection of water-insoluble dyes by micro-sublimation, B., 1025. Protection by by micro-

See also Beutel, E. Kutzner, W., band analysis of the scintillation spectra of zinc sulphide phosphors

metallic coatings, B., 1358.

excited by a-rays, A., I, 497.

Kuvshinski, E. V. See Kobeko, P. P.

Kuwada, K. See Kotake, M. Kuwada, S., saponins. XII. Sapogenin of Gleditschia horrida, Makino, A., II, 512. and Toyama, T., oxidation of 3-epidihydrocholesterol acetate with chromic oxide; 3-epihydroxyallocholanic acid A., II, 190.

Kuwata, T., oxidation of a-pinene with potassium permanganate in acctone solution, A., II, 67. Catalytic action of Japanese acid clay on terpene compounds. V. Hydration of a-pinene with acetic acid, A., II, 67. Oxypino-camphone, a new terpene ketol, A., II, 158. and Ishii, Y., wool fat. III. Lanopalmic

and lanoceric acid, A., II, 47... Kuzin, A., enolisation of sugars under the influence of different bases, A., II, 135. Catalysis of formaldehyde condensation by hexoses. IV. Vitamin-C as catalyst for synthesis of carbon chains, A., II, 176. Enzymic synthesis of carbohydrate chains. VII. Existence of carboligase, A., III, 220.

and Kotschkin, A., active form of simple sugars. II. Comparative study of oxidation of glucose 6-phosphate and glucose, A., II, 177.

Kuzin, S. A., separation of halite from sylvine minerals by flotation, B., 777. Flotation of Solikhamsk sylvine ores, B., 1335.

See also Andreeva, A. I., and Schvedov, D. A.

Kuzmenko, A. A., illumination of seed by light of different wave-lengths, B., 601. Kuzmenko, P. P., dry pressing in refractory-

grog industry, B., 139.

Kuzmin, L. L., corrosion of materials by sulphur and solutions of ammonium sulphate and neutral and acid ammonium sulphite at high temperatures and pressures, B., 49.

See also Postnikov, V. F.

Kuzmin, S. F. See Schwartz, A.

Kuzmina, E. I., ternary system KCl
KNO₃-K₂SO₄, A., I, 82.

Kuzmina, L. I. See Mindlin, S. S.

Kuzmina, V. P., spectral analysis of tin

in gold ores, B., 1221. Kuzminich, I. N., Surkov, E. I., Judina, V. I., and Andreeva, E. A., reaction of sulphur dioxide and oxides of nitrogen under conditions of intense mixing, A., I, 521.

and Turchan, E. J., experiments on oxidation space in the intensive tower process, at the Vojkov works, B., 900.

Turchan, E. J., and Juschmanov, E. V.oxidation space in the tower sulphuric

acid process, B., 338. Turchan, E. J., and Popova, A. A., rapid colorimetric control of the chamber and tower [sulphuric acid] processes, B.,:434.

Kuznetzov, A. S., content of free oxygen in a fuel gas and its explosiveness, B.,

Kuznetzov, N., and Moiseev, A., application of objective colorimetry to water analysis,

Kuznetzov, V., spontaneous inflammation

of p-nitrosophenol, B., 1018. Kuznetzov, V. D., Babenko, G. M., and Demidenko, D. A., plasticity of lead on rolling, B., 50. and Karpova, M. P., centres of recrystal-

lisation in deformed zinc monocrystals,

A., I, 16.

and Zolotov, V. A., rôle of mechanical twin formation in recrystallisation of deformed zinc single crystals, A., 1, 16.

Kuznetzov, V. G., X-ray investigation of the anomalous solid solutions of ammonium chloride with the chlorides of manganese, cobalt, and nickel which are formed in aqueous solution, A., I, 509. Polytherms of the ternary system MgSO₄-MgCl₂-H₂O, A., I, 518. See also Ageev, N. V., and Kurnakov, N. S.

Kuznetzov, V. I., production of lead dioxide, B., 1045.
Kuznetzova, V. S. See Kusakov, M. M.

Kuznezova, V. See Popov, N.

Kvartschava, I., secondary emission and fatigue of photosensitive oxygencæsium electrodes, A., I, 346.

and Timofeev, P. V., time lag of gasfilled photo-electric cells, B., 54.

Kvascha, O. G. See Hochberg, B. M.Kvatchkoff, I., curdled ewe's milk, B., 722. Kviat, E. I. See Fischer, M. N.

Kwal, B., classical dynamics of the electron; theory of first functions and the characteristic moment of the electron, A., I, 209.

Kwan, L. M. See Pfeiffer, P. Kwartler, C. E., and Lindwall, H. G., condensation reactions of quinolinealdehydes, A., II, 209.

Kwiatkowski, B. See Urbánski, T. Kwiatkowski, K. See Centnerszwer, M. Kylin, E., isoelectric point of human

serum-albumin, A., III, 371. and Elmquist, H., blood-sodium in essential hypertonus and Simmond's disease, A., III, 15.

and Paulsen, F., preparation of fibrinogen from human blood, A., III, 371.

Kynch, G. J., multiplet structure in a crystalline electric field of cubic symmetry, A., I, 595. See also Penney, W. G.

Kyogoku, K., transformation of dehydrodeoxycholic acid into a- and β -3-hydroxy-12-ketocholanic acid in the organism of the toad, A., II, 150.

Kyrides, L. P., phthalyl chloride, A., II,

and Monsanto Chem. Co., plastic compositions, (P.), B., 261. Plastic [nitrocellulose] compositions and manufacture thereof, (P.), B., 262. Benzylsalicylic acid, (P.), B., 529.

Retailliau, H. H., and Monsanto Chem. Co., flavouring of foodstuffs, (P.), B.,

285.

See also Nat. Aniline & Chem. Co. Kyropoulos, S., oiliness in motor [lubricating] oils, B., 518.

and Shobert, E. I., coefficient of nonviscous friction of thin lubricating layers, B., 642.

Kyzer, E. D. See Clyburn, T. M.

L.

Laanes, T. See Bates, R. W.

Laar, J. See Biltz, W.

Laar, J. J. van, present ideas on conditions of electrolytes in aqueous solutions, A., I, 77.

Laatsch, W., development and classification of German arable and forest soils, B., 1248.

La Barre, J., mobility and gastric secretion during hypoglycæmia following incretin administration, A., III, 42.

and Kettenmeyer, G., effect of barbiturates on the increased secretion of adrenaline after insulin, A., III, 320.

and Saric, R., increase of adrenaline in adrenal venous blood after injection of insulin, A., III, 151. Central nervous origin of post-insulin hyperadrenalinamia, A., III, 360.

Labat, J. A., rapid determination of the serine-globulin ratio in blood-serum, A., III, 111. Isolation of arsenic from head

hairs, A., III, 138. La Baw, R. G. See Knnz, J.

Labes, R., formation of colloidal elements of arsenic and tellurium groups by oxidation and reduction processes as cause of poisoning of animal cell structures and enzymes by AsH₃, H₂S, TeO₂, etc., A., III, 218.

Wedell, K., and Lippross, O., relationship between the action of convulsive poisons and disturbance of tissue respiration. I. Pyramidone convulsions in frogs after administration of subnormal doses of pyramidone and hydrocyanic acid, A., III, 351. Laborey, (Mme.) F. Sec Lavollay, J.

Labour, G. See Geoffroy, R. Labout, J. W. A. See Saal, R. N. J.

Labruto, G., and Landi, A., bituminous schists of Quartellari, Rodi (Messina), A., I, 205. Action of benzoyl chloride on sodium azide in contact with alkali, A., II, 375. Lignite of Messina province [Italy]. I. Lignite of Gravitelli, commune of Messina, B., 1151.

Lacape, and Jourdin, residual solvent in

powder B, B., 1279.

Lacey, W. N. See Sage, B. H.

Lachat, L. L., biological methods for vitamin-D carriers, A., III, 79.

Determination of vitamin-D. VII. Effect of age, sex, size, and calcification in young chicks on accuracy of pre-

ventive bioassay, A., III, 79. and Halvorson, H. A., determination of vitamin-D. VI. Comparative vitamin-D requirement of the chick for sardine (pilchard), concentrated, and cod-liver oils, irradiated yeast, irradiated ergosterol, and irradiated cholesterol, A., III, 79.

See also Halvorson, H. A.

Lacher, J. R., theoretical formula for solubility of hydrogen in palladium, A.,

Lachman, A., and Vapor Treating Processes, purification and refining of hydrocarbon oils, (P.), B., 322. Refining of

hydrocarbon oils, (P.), B., 874.

Lachs, H., Kronman, J., and Wajs, J.,
heterogeneity of different kinds of
cellulose. I., B., 654.

and Minkow, I., surface tension of heavy

water, A., I, 501. Lackey, R. W. See Hambleton, B. F., and Taylor, W. F.

Lacombe, P., and Chaudron, G., solution potentials of aluminium and light âlloys, B., 797.

Lacoste-Tayan, H., recoil cycles of magnet steels, B., 1060.

Lacount, R. G., and Hodgdon, R. E., interferometer wave-lengths in secondary spectrum of hydrogen, A., I, 485. See also Kent, N. A.

Lacourt, (Mlle.) A., quantitative organic analysis by hydrogenation applied to micro-analysis, A., II, 128. Volumetric micro-determination of oxygen (ter Meulen procedure), A., II, 436. See also Wuyts, H.

Lacroix, A., meteorites (aërolites) found in the Tanezrouft (Western Sahara), A., I, 51.

Lacroix, J. See Clarens, J.

La Croix, V. See Kahler, H. Ladd, E. T., and Isco Chem. Co., hydrated ferric chloride, (P.), B., 135.

Ladell, W. R. S., apparatus for separating insects and other anthropods from the soil, B., 710.

Ladenburg, R., modern values of the atomic constants e and h, A., I, 215. and Roberts, R. B., deuteron-deuteron reaction, A., I, 108.

Ladoo, R. B., nepheline syenite, B., 777. Lächele, W. See Dold, H.

Laemmlein, G., twisted [crystals of] quartz, A., I, 155.

Längauer, D., exploitation of langueinite. II. Preparation of potassium sulphate from languleinite, B., 539.

Laer, M. H. van, oxidation of worts and beers, B., 176. Bacterial problems in beer, B., 967.

Laer, P. H. van. See Keesom, W. H. Lafay, A., and Lafay, B., application of artificial radioactivity in therapeutics, A., III, 348.

Lafay, B. See Lafay, A.

Lafferty, H. A., effects of tar on germination of wheat seed, B., 167.

Laffite, S. See Caujolle, F.

Laffite, P., and Locuty, P., preparation of acid ammonium sulphate 3(NH₄)₂SO₄,H₂SO₄, usable in analysis, A., I, 258.

and Parisot, A., influence of velocity of detonation of an explosive on velocity of explosion wave, A., I, 191. Detonation of ammonium nitrate, B., 395.

See also Baron, J., and Holtermann, C. Laffond. See Delassus.

La Fleur, A., ternary and quaternary explosion regions and Le Chatelier's

formula, A., I, 313.

Lafon, M., lipin-soluble factors necessary for the growth of Drosophila melanogaster, Meig., A., 111, 187. Watersoluble factors necessary for the growth of Drosophila melanogaster, Meig., A., 111, 187.

Lafont, R. See Bouchet, C. La Forge, F. B., and Haller, H. L., solubility of semicarbazones in dilute hydrochloric acid, A., I, 298. Constituents of pyrethrum flowers. VIII. Presence of a new ester of pyrethrolone, A., II, 511. Purified pyrethrin concentrate, (P.), B., 1108. See also Haller, H. L.

Lafosse, H., and Fron, G., [fungal] disease

of elms, B., 825.

La Fratta, E. See Laporta, M.

Lagassé, F. S., responses of Yellow Transparent apple trees in Delaware to various

nitrogen treatments, B., 169.

Lagatu, H., and Maume, L., nutritional influence of superphosphate on the vine, B., 710. Possibility of separate measurement of nutritive and ameliorative effects of a fertiliser application at any period of crop growth, B., 819. Agricultural significance of difference between nutritive and ameliorating effects of manure, B., 820. Calcium applications to vines, B., 825. How can variations in the Mediterranean climate affect physiological ratio and quantities of absorbed nitrogen, phosphoric acid, and potash in the vine? B., 825. Influence of basic slag on the vine, B., 825. Chemical investigation of the cultivated plant, B., 1385. Phosphoric acid in the "physiological N-P-K equilibria" in the vine

leaf, B., 1387.
Lageder, K., porphyrin in erythroyetes,
A., III, 163.

Lagelez, J., cellulose sponges, B., 893.
Lagen, J. B., Soley, M. H., and Leake, T. B., effect of benzedrine sulphate on basal metabolic rate, A., III, 134.

Lagerev, S. P., formation of benzhydrol from benzophenone in Grignard's re-

action, A., II, 190.

Lagerqvist, K., Wallmark, S., and Westgren, A., X-ray study of the systems CaO-Al₂O₃ and SrO-Al₂O₃, A., I,

Lagrange, (Mlle.) R. See Bardet, J. Lagsdin, J. B. See Wyckoff, R. W. G. Lahey, F. H., thyroid and parathyroid diseases, A., III, 14. See also Perkin, H.J.

Lahr, K. von der, open-hearth furnace, (P.), B., 1224.

Lai-Fook, C. O. See Davies, J. G.Laibach, F., influence of light on response

of plants to growth-substance, A., III, $24\bar{2}$.

and Fischnich, O., transport of growthsubstance in plants. I. and II., A.,

and Lotz, R., investigation of growthpromoting substances, A., III, 50.

Laidlaw, P. P., Smith, Wilson, Andrewes, C. H., and Dunkin, G. W., influenza: preparation of immune sera in horses, A., Ill, 117.

Lainé, P. See Kürti, N. Laine, T. See Virtanen, A. I.

L'Air Liquide Société Anonyme pour l'Étude & l'Éxploitation des Procédés G. Claude, simultaneously obtaining krypton and nitrogen from air, (P.), B., 1203.

Laird, D. G., and West, P. M., influence of bios on nodule bacteria and legumes, A., III, 160.

Laird, R. F. See Holt, L. C.

Laissus, J., cementation of nickel by beryllium, B., 1064. Cementation of ferrous alloys by beryllium, B., 1216. Iron-beryllium alloys, B., 1216.

Laitinen, H. A. See Kolthoff, I. M. Laiwalla, M. C. See Shah, R. C.

Lajos, S., relation between formation of agglutinins and intermediary metabolism of fat and carbohydrates, A., III, 293.

and Gerendás, M., spectrography of vitamin-P (citrin) and of other flavonelike substances, A., III, 441.

Lajtai, I. See Kiss, A. von. Lake, W. O., use of fire cements in industry, B., 141.

Lakeland Foundation. See Gruskin, B. Lakeside Engineering Corporation. See Nordell, C. H.

Lakhovsky, G., sterilisation of water and other liquids, (P.), B., 986.

Laki, K., significance of fumaric acid for the respiration of animal tissues. III. Hydrogen donator of oxalacetic acid reduction in muscle; function of succinodehydrogenase, A., III, 59. Malic dehydrogenase, A., III, 352. Oxidation-reduction potential of the system oxalacetic acid-l-malic acid. A., I, 567. Oxidation by fumarate of reduced yellow enzyme, A., III, 428. Rôle of the second earboxyl group in enzymic hydrogenation of oxaloacetic acid, A., III, 428. Straub, F. B., and Szent-Györgyi, A.,

respiratory catalysis by C4 dicarboxylic acids, A., Ill, 268.

Lal, J. B., constitution of the glucoside butrin isolated from Butea frondosa flowers. I., A., II, 445. Fruits of Physalis Peruviana or Cape gooseberry. I., A., III, 322. See also Pendse, G. P.

Lal, K. B., and Krall, H., phenylthiocarbamides; the triad -N·C·S-. IV. Action of silver nitrate on phenylthiocarbamide. V. Action of nitrous acid on N-phenyl-N-methylthiocarbamide, A., II, 492.

La Lande, W. A. See Butz, L. W. L'Alfa, Colas, L., Colas, J., and Colas, A.,

[gas-]filtering cartridges, (P.), B., 6.

Lalin, T., and Göthlin, G. F., comparison by volumetric methods of ascorbic acid (vitamin-C) content of freshly lifted and one-year-old potatoes, B., 492.

Lallemand, A., photographic application of a method of amplifying the energy of photons, A., I, 7.

Lalli, A. See Stolfi, G.
Lamar, E. S., Bnechner, W. W., and Compton, K. T., low-voltage proton sources, A., I, 437.

Lamarche, P. See Bouchet, C. La Master, J. P. See Elting, E. C. Lamb, A. B., and Damon, E. B., dissociation constants of diaquotetramminecobaltic cation as an acid, A., 1, 184.

and Woodhouse, J. C., adsorption by dehydrated chabasite as a function of water content, A., I, 129.

Lamb, C. A., tensile strength, extensibility, and other characteristics of wheat roots

in relation to winter injury, B., 821. Lamb, E. B. See Harger, R. N. Lamb, F. W. See Ewing, D. T.

Lamb, G. B., electric furnaces for aluminium alloys, B., 936. Electric heattreatment furnaces [for metals], B., 1229.

Lamb, M. C., fireproofing [vegetabletanned leather, (P.), B., 704.

Lamb, N. See Du Pont de Nemours & Co., E. I.

Lamb, W. E., jun., capture of slow neutrons in hydrogenous substances, A., I, 161. Lambermont, F., use of copper carbonate

sprays in the cultivation of sugar beet, B., 958.

Lambert, (Mme.). See Étrillard. Lambert, E. B., and Crandall, B. S., seedling wilt of black locust caused by Phytophthora parasitica, B., 74.

and Humfeld, H., growing of mushrooms, (P.), B., 1255.

Lambert, E. H., and Gellhorn, E., influence

of carbon dioxide on blood pressure reaction to oxygen deficiency, A., III, 289. Lambert, E. P. C., concrete having a high electric-insulation resistance, (P.), B.,

677. Lambert, J. D. See Küehler, L.

Lambert, L. B., and Walton, H. R., control as a factor of plant design, B., 399.

Lambert, P., and Fautraz, J., dispersion of hæmoglobin, A., III, 110. Lambert, R. See George, H.

Lambert, S. E. See Hund, W. J. Lambert Pharmacal Co. See Read, R. R.Lamberton, A. H. See Patterson, T. S. Lamberton, J. See Perrin, R.

Lambertz, A., and Schulze, B., conductivity measurement of paper extracts, B., 427. Lambie, C. G., and Trikojus, V. M., pre-

paration of a purified thyrotropic hormone by chemical precipitation, A., III,

Lambie, D. A. See Schoeller, W. R. Lambin, S. See Régnier, J.

Lambourne, J. See Belgrave, W. N. C., and Georgi, C. D. V.

Lambrecht, R. See Fischer, Hans. Lambrecht, W., tungsten and molybdenum compounds in pigment manufacture, B., 809. Manufacture of pigments by grinding instead of precipitation. I. and II., B., 809, 1086.

Lambrechts, A., colour reaction for phloridzin, A., III, 192. Phloridzin diabetes, phloridzin and related substances. I. Properties and coloured reactions of phloridzin. II. Eate of phloridzin injected intravenously into the dog. III. Relation between molecular structure and diabetogenic action. IV. Mechanism of phloridzin glycosuria, A., III, 342.

Lambret, O., Bizard, G., and Driessens, J., influence of adrenaline on concentration of Congo-red in the blood of the dog, A., III, 101.

Driessens, J., and Cornillot, M., effect of scalding on erythrocyte and leucocyte counts and hæmoglobin in rabbits, A.,

Driessens, J., and Malatray, H., action of infra-red rays on post-operative acidosis and hypochloræmia, A., III, 84. Action of insulin-glucose-ehloride on post-operative acidosis, A., III, 151.

Lambris, G., and Boll, H., rapid determination of carbon content of solid and

liquid fuels, B., 311.

Lameck, P., and Nierhaus, H., utilisation of coal, B., 1152. Lamel, H., artificial rubber, B., 473.

See also Leithe, W.

La Mer, V. K., and Greenspan, J., kinetics of solvent decomposition of nitroamide in H₂O-D₂O mixtures, A., 1, 570. See also Greenspan, J., Hochberg, S., Liotta, S., Percival, J. O., and Rule, C. K.

Lamerson, P. G., and Parker. Ralph L., arsenical compound substitutes for lead arsenate in control of codling moth, B.,

Lami, R., content and variation of salinity and alkalinity of water contained in the cavity of Codium bursa, L., A., III, 88.

Lamidon, P. See Le Grand, A. Lammers, F. J., continuous causticising system at Crossett [pulp and] paper

mills, B., 769.

La Monte & Son, G. See Simons, F. L. Lamort, M., and Lamort Fils, E. & M., endless conveyor band filter, (P.), B., 1147. Lamort Fils, E. & M. See Lamort, M. Lamour, P. See Polonovski, M. Lamp, A. R., utilisation of [cane] molasses,

B., 1111.

Lampe, B., and Buse, R., influence of temperature and light on result of the Barbet test, B., 607.

and Deplanque, R., potato meal, B., 1260. Discoloration of potato flakes and potato meal, B., 1265. Economy in malt in the distillery, B., 1394.

Deplanque, R., and Roehrich, E., composition of dried sweet potatoes and preparation of spirit therefrom, B., 1116.

Lampe, G. See Taiel, V. Lampe, W., Blenderowna, E., and Bluman, A_{ij} attempted synthesis of $\alpha\beta$ -dicinnamoylethane, A., II, 378. and Pohoska, J., synthesis of $a\beta$ -di-

(3:4-methylcncdioxycinnamoyl)ethane,

A., II, 380.

Lampitt, L. H., heat-exchange and steam equipment in the food industry, B., 78. Bushill, J. H., and Filmer, D. F., dialysis of milk. III. Salt equilibrium with special reference to calcium, magnesium, and phosphorus, A., III, 457.

and Money, R. W., pectin gels. I.

Measuring strength of pectin gels,

B., 1126.

and Sylvester, N. D., irradiation of fats. II. Analysis of oxidised fats; interrelation of results, B., 151.

Lampman, C. M. See Schurecht, H. G. Lamson, P. D., and Ward, C. B., earthworms as test objects for determining value of drugs to be used in human intestinal helminth infestations, A., III,

Lan, T. H., biological values of mixed cereal and legume proteins, A., III, 61.

Lanatta, J. F., p_H and reaction of cultivated soils, B., 1249.

Lance, A. E. See Graham, J. I. Lanczos, A. See Mansfeld, G.

Land, E. H., and Sheet Polarizer Co., formation of improved light-polarising bodies, (P.), B., 1150. Landa, A. L. See Girschovitsch, N. G.

Landa, S., and Habada, M., preparation of diethyltetradecane, A., II, 1. Influence of structure of olefines on the iodine yalue, A., II, 81.

Landabure, P. B., and Pangaro, J. A., isoglycamic curves in obesity, A., III,

Landahl, H., and Monk, G. S., interferometer measurements of wave-lengths in H₂ bands, A., I, 435.

Landau, L., theory of phase transitions. I. and II., A., I, 22, 363, 450. Theory of unimolecular reactions, A., I, 141. Kinetic equation for the case of Coulomb interaction, A., I, 170. Theory of superconductivity, A., I, 404. Statistical theory of the nucleus, A., I, 440.

and Lifschitz, E., theory of the photoe.m.f. in semiconductors, A., I, 114. and Pomerantschuk, I., properties of metals at very low temperatures, A.,

I, 229.

and Rumer, G., absorption of sound in solid bodies, A., I. 353. Production of showers by heavy particles, A., I, 594.

Landé. A., waves and corpuscles in quantum

physics, A., I, 215 Lande, L. M. F. van de. See Wibaut, J. P. Lander, C. H., and Howard, J. V., tensile properties of solid mercury, and comparison with those of other metals at low temperatures, A., I, 19.

Lander, J. See Courtanids, Ltd. 10 310 Lander, P. E., and Narain, R., mineral matter in sugar-cane juice. I. Effect on recovery of white sugar, B., 1109.

Landes, K. K., pegmatites and hydrothermal veins, A., I, 538.

Landi, A. See Labruto, G.

Landingham, A. H. V., Henderson, H. O., and Bowling, G. A., chemical composition of blood of dairy cattle. Effect of phosphorus intake on the calcium and inorganic phosphorus content of whole blood of dairy heifers during first gestation and Iactation, A., III, 372.

Landis, E. M. See Westfall, B. B.

Landis, G., and Frey, G. N., development of "standard" A.A.C.C. standard baking test, B., 832.

Landis, W. S., concentrated fertilisers, B.,

Landis & Gyr Akt.-Ges., thermostat of the kind wherein an expansible liquid is employed as the temperature element, (P.), B., 302.

Landolt, A., $p_{\rm H}$ control in textile treatment, B., 658.

Landon, M., reversibility of the effect obtained by boiling nitrocellulose with chalk, B., 1280.

See also Demougin, P.

Landon, P., distillation of coal and similar substances, (P.), B., 519.
Landon, R. H. See Harvey, R. B.

Landsberg, G. S., development of [quantitative] spectral analysis, A., I, 578.

Landspersky, H., influence of surface-active materials on growth of beer sarcina, B., 1116.

Landt, E., and Hirschmüller, H., objective spectral colorimeter, A., I, 534. Relation extinction coefficient and between Stammer degrees, B., 964.

Landt, G. E., and Continental-Diamond Fibre Co., odourless synthetic resinous [phenol-aldehyde] products, (P.), B.,

Landt, H. See Katz, L. N. Lane, C. B., and Hammer, B. W., Roquefort cheese, B., 723.

Lane, C. T., magnetic analysis of evaporated bismuth deposits, A., I, 404. Lane, G. T. See Kodak, Ltd.

Lane, I.J. See Thorne, W.F.Lane, J.F. See Young, W.G.

Lane, P. S., wear-testing [of metals], B., 1219.

Lane, R. H., inhibition of [plant] roots by

growth hormone, A., III, 242.
Lane, T. B., and White, Paul, measuring electrophoresis by the ultramicroscope, A., 1, 267.

See also Crowther, J. A.

Laneau, R., and Rosier, S., presence of free oxygen in beer, B., 966.

Lanfranchi, A., and Foresti, C., Donaggio's reaction of immunising preparations and bacterial suspensions, A., III. 170.

and Pacchioni, G., Donaggio's reaction of dog's urine, A., III, 170.

Lang, A., lipin content of the organs of young rats, A., III, 252. See also Bierich, R.

Lang, A. G., use of n-butyl alcohol in the paraffin method, A., III, 447. Lang, A. L. See Bauer, F. C.

Lang, C. W. See Ayers, S. H.
Lang, E. H. See Iddles, H. A.
Lang, F. J., and Internat. Paper Co.,
paper, (P.), B., 536.

Lang, H., cooking utensil enamels, B., 440. Lang, H. M., Rosenbaum, A. H., and Cohn, Sigmund, coating of an electron emitter, (P.), B., 1076.

Lang, K., determination of chloride in blood, A., III, 196. Effect of dietary protein on the composition of the proteins of blood, A., III, 303.

Lang, R., and Faude, E., chromatometric determination of tellurous acid in hydrochloric acid solution; determination of antimonious acid or arsenious acid in presence of tellurous acid, A., I, 261. Ferrometric determination of cerium, manganese, chromium, and vanadium in presence of one another, A., I, 263. Activation of ferrous salts by periodate, A., I, 368.

Lang, R. J. See Russell, H. N. Lang, W., destruction of field mice, B., 827. Langbein, G. See Vollmann, H.

Langbein-Pfanhauser-Werke Akt.-Ges., [apparatus for] electrolytic oxidation of small [aluminium] articles in bulk, (P.), B., 148. Treatment of small articles in electrolytic baths, (P.), B., 254. Rotatable drums for surface treatment of articles in bulk, (P.), B., 990.

Lange, B. See Gen. Electric Co.

Lange, E., thermodynamic processes arising from changes in work capacity, A (= U - S), A., I, 242.

and Martin, W., integral heat of solution of sodium chloride in H₂O-D₂O mixtures at 25°, A., I, 186. Isotope effects in heats of solution of 99 salts and of mercuric cyanide at 25°, A., I, 619. 化氯甲磺基二甲酚

Lange, E., and Nagel, K., normal elements and lead accumulator as almost ideal cells, A., I, 520.

and Sattler, H., heats of hydration and solution of anhydrous copper sulphate in light and heavy water, A., I, 518. See also Birnthaler, W., Kellermann, A.,

and Klein, Otto.

Lange, F. E. M. See Dammann, E. Lange, Heinrich. See Wever, F.

Lange, Herbert, physical properties of thin metal films, A., I, 173. Testing of magnet steels, B., 1060.

and Hänsel, H., application of magnetic methods of determination to metallurgy, B., 680. Austenite transformation of pure carbon steels in the quenched state, B., 1350.

Lange, J., and Herre, E., van der Waals forces in electrolyte solutions, A., I, 519. Lange, L., bacteriological test of von Brehmer's cancer diagnosis, A., III, 123. Lange, W., and Kohlmeyer, E. J., nickel oxide in the metallurgy of nickel, B., 922. Langecker, H. See Schenk, F.

Langedijk, S. L., selvents and diluents for

cellulose lacquers, B., 63.
and Stedehouder, P. L., completion of
Krafft's proof of the structure of

cetene, A., II, 269.

Langelier, W. F., analytical control of anticorrosion water treatment, B., 193. Langenbeck, W., importance of synthetic organic catalysts for the theory of enzyme action, A., III, 29.

and Gödde, O., organic catalysts. XV. Synthetic carboxylases. V., A., II, 261. and Ruge, U., luminol, A., II, 167.

and Sauerbier, R., organic catalysts. XVII. Hydration of crotonaldehyde to aldol, A., II, 368.

and Triem, G., maintenance and origin of optical activity in nature, A., III, 29. and Weschky, L., synthetic dehydrogenascs, A., 111, 268.

Weschky, L., and Gödde, O., organio catalysts. XVI. Synthetic dehydrogenases. III., A., II, 261.

Langenberg, R., Raman investigations with glasses, A., I, 62. Effect of an electric field on polarisation of the Raman lines, A., I, 113.

Langenbuch, precautions to avoid injury to potato haulm during arsenical spraying against Colorado beetle, B., 822. Langer, A. See Dubský, J. V.

Langer, E. O., extension of gradation of light-sensitive [photographic] emulsions by Sterry's method, B., 981.

Langer, I. N. See Tananaev, N. A. Langer, K., comparative stretching and elasticity tests with silk and artificial

silk, B., 533. See also Herzog, A. Langer, L. M., and Whitaker, M. D.

shape of β -ray distribution curve of radium-E at high energies, A., I, 338. Sec also Mitchell, A. O. G.

Langer, R. E., connexion formulæ and solutions of the wave equation, A., I, 278. Langer, R. M., passage of X-rays through

oscillating crystals, A., I, 501.

Langer, T. See Pestemer, M.

Langer, T. W., MeBride, C. E., Carlson, R. J., Stow, M., Clardy, F. B., and Texaco Salt Products Co., crystallisation of salts, (P.), B., 1201.

and Texaco Salt Products Co., uniform Epsom salt crystals, (P.), B., 543. Crystallisation [of salts], (P.), B., 1201.

Langer, W. See Graf, R.

Langerman, A. See Rosenberg, J. E. Langevin, A., variation of the piezoelectric modulus of quartz as a function of temperature, A., I, 290. Measurement of explosive pressures; comparison of crushers and piezo-electric quartz [as pressure gauges]. I., B.,

and Moulin, (Mlle.) A. M., variation of the modulus of quartz as a function of the temperature. II. Low temperatures, A., I, 503.

Seo also Muraour, H.

Langford, G. B., and Hancox, E. G., hypogene anhydrite from McIntyre mine, Porcupine District, Ontario, A., I, 102. Langham, W. H. See Daniel, H. A.

Langhans, [explosive] compounds of thallium with aromatic nitro-compounds, B., 190.

Langheim, R. See Hahn, H., and Juza, R. Langley, B. C. See Reynolds, E. B.
Langlykke, A. F., and Peterson, W. H.,
determination of acetylmethylcarbinol, A., II, 229.

Langmuir, D. B., automatic plotting of electron trajectories, A., I, 437.

Langmuir, I., two-dimensional liquids, and solids, A., I, 67. and Schaefer, V. J., optical measurement of the thickness of a film adsorbed from a solution, A., I, 479. Conditioning surfaces for adsorption, A., I, 562. Monolayers and multilayers of chloro-

phyll, A., I, 613. Schaefer, V. J., and Sobotka, H., multilayers of sterols and adsorption of digitonin by deposited monolayers, A.,

I, 563.

Schaefer, V. J., and Wrinch, D. M., built-up films of proteins and their properties, A., I, 180.

Sec also Blodgett, (Miss) : K. B., and Taylor, J. B.

Langrish, (Miss) D. See Hammick, D. L. Langsdorf, A., jun., continuously sensitive cloud chamber, A., I, 536. Langston, W. C. See Day, P. L.

Langstroth, G. O., and McRae, D. R., absorption step-weakeners of antimony, A., I, 634.

Langton, H. M., influence of fats and oils in feeding-meals, B., 82.

Langwell, H., ethyl alcohol as a potential source of plastics, B., 698. See also Distillers Co.

Langz, E. See Falck, J.
Lanin, V., and Nozdrev, V., phosphorus in peat and in peat coke, B., 102.
Lankelma, H. P. See Dn Pont de Nemours

& Co., E. I.

Lankeren, C. van, corpus luteum hormone action of placenta extract, A., III, 74.

Lanner, K. See Raudnitz, H.

Lanning, J. H., effect of sucrose and maltose on acid and gas production in doughs, B., 386.

Lansac, J. See Baisset, A. Lansade. See Schribaux.

Lansbury, J. See Rowntree, L. G. Lansdon, H. I. See Royster, P. H.

Lanser, A., and Bowser & Co., S. F. device for separating gas from liquid, (P.), B., 307.

Lansley, A. S. B., Palmer, A. R., and Caldwell & Son, J. J., emulsifying and homogenising apparatus, (P.), B., 1148. Lant, R., woven or knitted fabric mainly

consisting of cellulosic fibres, (P.), B., 334.

Lantnškin, C. M. See Křiženecký, J. Lantz, H. L., eider making, B., 830.

Lantz, L. A. See Calico Printers' Assoc. Lantz, R. See Soc. Anon. des Mat. Col. & Prod. Chim. de St. Denis.

Lantzevitzkaja, L. L. See Eminov, E. A. Lanzer, J., difficulties of dyeing vat dyes from a standing bath, B., 1039.

La Parola, G., reaction of maleic anhydride with α - and β -benzaldoxime: benzoylaspartie acid, A., II, 501.

LaPiana, F. G., progress in starch sizing of rayon warps, B., 1196.

Lapicque, L., use of the allometric formula, A., III, 268.

Lapin, N. N., and Temianko, V. S., application of the mercury cathode to determination of alumina in iron ores, B., 1058.

Lapina, R. A. See Schtschukina, M. N. Lapina, T. See Viugovski, G.

Lapinski, L. K., physico-chemical determination of moisture in dairy products, B., 492. Determination of bound water in cheese, B., 613.

Laporta, M., and La Fratta, E., biological value of wheat gluten and of globulin

of cottonseed, B., 976.

Laporte, M., production of white light by electrical luminescence of gases, A., I, 103. Production of white light by electrical luminescence of xenon, A., I, 336. Law for emission of continuous spectrum radiation (white light) from xenon tubes, A., I, 386. Discharge of a condenser through a

tube of gas, A., I, 551. and Corda, P., fine structure of the luminous flashes produced by the discharge of a condenser through a tube

of gas, A., I, 486.

Laporte, O., absorption coefficients for thermal neutrons, A., I, 490.

See also Mack, J. E.Laporte, Ltd., B., Weber, I. E., and Wood, W. S., barium sulphate, (P.), B., 1047.

Lapp, C., and Lévy, A., rotatory power of some alkaloids derived from ecgonine, A., II, 526.

and Rohmer, J., composition and food value of the locust (Schistocirca gregaria), A., III, 304.

Lapp, (Mme.) E., specific heat of iron, A., I, 71.

Lapp, H. See Degkwitz, R. Lappe, F., and North Amer. Rayon Corp.,

artificial silk, (P.), B., 28.

Lappen, J. J. See Spielman, L. A.
Lapschin, M. I., conductometric titration
of salts of weak bases (acids) with a dissociation constant greater than 10-4 A., I, 323. Determination of reaction of effluent waters, B., 1282.

Laptev, A., and Erziutova, E., use of activated charcoal instead of decolorising earths [in oil purification], B.,

and Milovodski, V., action of soaps on white fabrics and on human skin, B., 1078.

Lapnk, M. See Balandina, V.

LaQue, F. L., nickel and nickel-base alloys; their use in design of corrosion-resistant machinery and equipment, B., 144. Nickel and its alloys [in food mannfacture], B., 449.

and Rolle, C., effect of thermal conductivity of metals on heat-transfer rates, B., 987.

Laqueur, E. See De Fremery, P., Dingemanse, E., and Reichstein, T.

Larambergue, R. See Fosse, R.

Larché, K. See Krefft, H.

Large, (Miss) D. K. See Finnemore, H. Larin, G. V., influence of adsorbed bases on formation of structures in clay suspensions, A., I, 239.

Larin, P. S., and Nagorski, M. V., catalytic

bleaching of pulp, B., 226.

Larionov, A. S. See Tschelincev, V. V. Larionov, J., and Tolmatschev, J. M., composition of cassiterites, A., I, 270. See also Kremenevski, N., and Seidel, A. Larionov, L. T., genesis of cancer, A., III,

123. Larisch, R. See Abel, E.

Lark-Horovitz, K., and Miller, E. P., X-ray scattering in molten salts. I., A., I, 553.

Larkin, J. P., nitriding [of steel], (P.), B.,

Larmer, F. G., keeping quality of sugar beets as influenced by growth and nutritional factors, B., 600.

Larmor, (Sir) J., physiological potency of dilute traces, A., III, 62.

Laroche, G. See Demanche, R.

Larocque, G. L., oil-paper relationship in the printability of paper, B., 427.

and Maass, O., influence of penetration in alkaline delignification of wood, B.,

Larose, P., quantitative analysis of woollanital [casein-wool] mixtures, B., 1185. and Tweedie, A. S., variation of sulphur content of wool, B., 654. Determination of sulphur in wool, B., 765.

Larsen, B. M., Shenk, W. E., and U.S. Steel Corp., radiation pyrometer device,

(P.), B., 1074. Larsen, C. J. See Robinson, F. W. Larsen, E. I. See Westinghouse Elee. & Manuig. Co.

Larsen, E. S., Irving, J., Gonyer, F. A., and Larsen, E. S., 3rd, petrologic results of study of minerals from tertiary volcanic rocks of the San Juan region, Colorado, A., I, 102.

Larsen, E. S., jun., and Gonyer, F. A., dakeite, a new uranium mineral from [Wamsutter,] Wyoming, A., I, 431.

Larsen, E. S., 3rd. See Larsen, E. S. Larsen, K. E., and Lynn, E. V., bark of American larch, A., III, 287.

Larsen, K. T. See Jespersen, J. C. Larsen, P., growth-substance inactivator from Phaseolus seedlings, A., III, 50.

Larsen, T., refraction and dispersion of heavy methane (CD₄), A., I, 285.

Larsen, V., Hald, J., and Eriksen, F., calcium silicates in medicinal use, B., 186. Larson, A. T., ammonia and methanol [methyl alcohol] catalysts, B., 777.

See also Du Pont de Nemours & Co., E. I. Larson, C. A., effects of continued application of irrigation water and commercial fertilisers to Ephrata fine sand in the Wenatchee orchard district, B., 1101.

Larson, C. E., and Greenberg, D. M., evidence for the presence of a diffusible organic substance in blood which accelerates blood clotting, A., II, 55.

Larson, H. W., Blatherwick, N. R., Bradshaw, P. J., Ewing, M. E., and Sawyer, S. D., metabolism of d-xylulose, A., III, 130.

Larson, L. H., and Vanderbilt Co., R. T. composition of matter [filler for paper], (P.), B., 536.

Larson, L. J., and Smith Corp., A. O., fabrication of alloy-lined [steel] pressure

vessels, (P.), B., 1360. Larson, M. E. See Weeks, M. E.

Larson, P. S., and Chaikoff, I. L., influence of carbohydrate on nitrogen metabolism in the normal nutritional state, A., III, 469. Larson, W. D., mercurous acetate electrode,

A., I, 310.

See also Lingane, J. J., and MacDougall, F. H.

Larsson, G., devices for separating liquids of different sp. gr., e.g., cream from

milk, (P.), B., 511.

Larsson, M. See Wadsted, B.

La Rue, C. D., intumescences on poplar leaves. III. Rôle of plant growth hormones in their production, A., III, 242. Use of bromine in sterilisation of fruits and seeds, B., 724.

Lasarev, B. G., and Schubnikov, L. V., magnetic moment of the proton, A., I, 121, 391.

See also Vereschtschagin, L. F.

Lasansse, E., Frocrain, L., and Pollés, C., distribution in the organs and elimination of copper following intracardiac injection of copper glycine in guineapigs, A., III, 63.

Kermarec, R., and Frocrain, L., colorimetric copper determination of blood-

glucose, A., III, 3.

Lasch, F., and Lustig, B., biochemical and biological changes in experimental mouse and guinea-pig carcinoma, A., III, 123.

Laschinger, J. E. See Durham, L. P. Laschko, N. F., shape of phase boundaries

in liquids, A., I, 499.

and Petrenko, B. G., surface energy in saturated phases, A., I, 76. Determination of activity of the solid phase, A., I, 116. Diffusion velocity of solid metals in relation to the lattice constants and the m.p., A., I, 232. Diffusion processes in ageing of alloys, B., 1068.

See also Frantzevitsch, I. N.

Laschnik, L. M., preparation of ammonium nitrate, with utilisation of the heat of reaction, B., 131.

Laser, H., tissue metabolism under the influence of low oxygen tensions and carbon monoxide, A., III, 380.

Lashmet, F. H. See Newburgh, L. H.Laska. See Blaha.

Laskey, N. See Friedlander, M.

Laskowski, M., absorption of inorganic and organic phosphorus from the intestine, A., III, 471.

Seo also Verzar, F.

Lasky, S. G., geology and ore deposits of the Bayard area, Central Mining District, New Mexico, A., I, 482.

Laslett, L. J., magnetic scattering of slow neutrons, A., I, 107. Long period positron activity: ²²Na, A., I, 593.

Lasnitzki, A., manometric studies on effect of tissue extract on calcium precipitation, A., III, 216.

and Lasnitzki, M., comparison of mineral and biological potassium in diet experiments, A., III, 21.

and Oeser, E. A., radioactivity of potassium prepared from animal tissue, A., I, 489.

Lasnitzki, M. See Lasnitzki, A. Lassablière, P., trophophylaxis, a new property of foods, A., III, 390.

Lassandro-Pepe, T., characteristic reactions [or medicinal substances], B., 839.

Lassberg, J. von, application of waste products in the cellulose and paper industries, B., 226. Progress in [German] cellulose and paper industry, B., 1319. Lassettre, E. N., interpretation of f.-p.

lowering data in terms of polymerisation, A., I, 462.

See also Anderson, T. F.

Lassiat, R. C. See Houdry Process Corp. Lassieur, A., accuracy of graduated pipettes, A., I, 380.

See also Kling, A.

Lastex Yarn & Lactron Thread, Ltd., and James, R. G., [de-electrification of] rubber latex or similar clastic threads or filaments, (P.), B., 1245. Lastovski, R. P. See Gerschzon, G. I.

Laszkiewicz, A., glaserite and syngenite of Stebnik, Poland, A., I, 382.

Laszt, L., and Verzar, F., adrenal cortex and fat absorption, A., III, 73. Disturbance of carbohydrate metabolism by removal of the adrenal cortex and its relationship to sodium metabolism, A., III, 436.

See also Verzár, F.

Latarjet, R., effect of variations in atmospheric ozone on the biological activity of sunlight, A., III, 308.

and Husson, A., physical aspects of colorimetric determination [of cholesterol] by the Liebermann-Burchard reaction, A., II, 360.

Latham, G. H. See Du Pont de Nemours & Co., E. I.

 Latham, L. See Brit. Celanese.
 Lathrop, F. H., Cupples, H. L., Hiley, J.,
 and Yust, H. R., comparative toxicities of methyl thiocyanate and hydrocyanic acid to the Californian red scale, B., 711. Latimer, W. M., relative stabilities of

isotopes of the lighter elements, A., I,

109.

See also Brown, O. L. I.

Latimer-Goodwin Chemical Co. See Hopkins, C. P.

Latischev, G. D. See Rusinov, L. I.

Latkiewicz, S., large-scale use of combinations of direct and basic dyes for colouring cotton, B., 336.

Latkowski, J., and Charlampowicz, B., biological action of the so-called short waves [$\lambda = 6.4 \text{ m.}$], A., III, 114.

Latner, A. L. See Hughes, J. H. La Tour, F. D., crystallographic study of fatty acid molecules, A., I, 350.

Latreille, M. See Roche, J.

Latschinov, S. S., reduction of iron catalysts for ammonia synthesis. I. Reduction process, B., 539.

and Vedenski, A. A., reduction of iron catalysts for ammonia synthesis. II. Influence of conditions of reduction catalysts on their activity, B., 777.

Latta, R., control of rhododendron white fly, B., 1255.

Latzke, E. See Christensen, F. W. Laub, A. See Pauli, W.

Laube, A. G., and Gruzdeva, Z., absorbent paper of the American type "Gee' for making laminated insulation boards, B., 332.

Sec also Rozenberger, N. A.

Laubender, W., experimental porphyrinuria induced by narcotics, A., III, 64.

Laubenheimer, A., and Wagner, R., replaceability of foreign by German kaolins [in paper manufacture], B., 1322.

See also Possanner. B. von.

Laubová-Sklenářová, O. See Jilek, A. Lauchlan, A. D. E., electrical control of chemical processes, B., 149.

Laucht, F., transformation of ergosterol with nickel, A., II, 191.

Laucius, J. F. See Marker, R. E. Lauckner, H. See Frers, J. N.

Laudat, M. See Chabanier, H., and Nicaud, P.

Lande, G., formation of ammonia by boiling certain proteins with alkali, A., II, 357.

Laudenbak, N. See Solius, N. Laudenklos, H. See Groth, W.

Lander, A., McGillivray, J., and Comrie, A., determination of hardness of milk curd, B., 180.

and Smith, A. M., effect of various fertilisers on soil acidity, B., 166. Laudermilk, J. D. See Merriam, R.

Laue, G. See Masing, G. Laue, M. von, variation in brightness along Kossel lines, A., I, 224. Detection of submicroscopic crystal surfaces by electron diffraction, A., I, 351.

Lauenstein, C. F., Ulmer, P. F., and Link-Belt Co., treating [ferrous] metal [with chromium], (P.), B., 1225.

Lauer, K., influence of solvent on course of chemical reactions. IX. Kinetics of simple substitution reactions. Aromatic monocarboxylic acids, A., I, 87; II, 339.

[with Abiko, Y.], influence of solvent on course of chemical reactions. XIV. Aromatic hydrocarbons, A., II, 283.

and Oda, R., influence of solvent on course of chemical reactions. XII. Heat of solution and energy activation in sulphonation of anthraquinone. XIII. Heat of solution and energy of activation in reactions of which one component serves as solvent, A., I, 142, 522. [Constitution and reactivity. XIX.], A., II, 331.

Oda, R., and Miyawaki, M., optical resolution of 1:I'-dianthryl-2:2'-di-

carboxylic acid, A., II, 341.

and Shingu, H., influence of solvent on course of chemical reactions. X. Kinetics of reaction between allyl bromide and sodium phenoxide in dissociating solvents. XI. Allylation of sodium phenoxide in mixed solvents, A., I, 87; II, 145.

Lauer, W. M., and Lones, G. W., alkylation of β -aminocrotonic esters, A., II, 138.

Laufer, (Miss) A. S. See Baker, J. IV. Laufer, S., evaluation of malt for brewing, B., 606. Proteolytic activity of barley malt, B., 966.

See also Epstein, S. S.

Lauffmann, R., [corrosion] behaviour of metallic materials in the tanning and leather industry, B., 929.

Laug, E. P., and Höber, R., excretion of bromide, iodide, and thiocyanate by the perfused frog kidney, A., III, 262.

Laughlin, W. C., Asch, A. B., and Filtration Equipment Corp., apparatus for cleaning sedimentation tanks, (P.), B., 198.

and Laughlin Filter Corp., centrifuge, (P.), B., 994.

Laughlin Filter Corporation. See Laughlin, W. C.

Laundry Automatic Appliances, Ltd., and Ribbans, S. H., [automatic] control of washing or dyeing machines, (P.), B., 433.

Launer, H. F., determination of resin in papers and pulps, B., 427. Simplified volumetric determination of a-, β -, and y-cellulose in pulps and papers, B.,

Launoy, L., and Prieur, M., biological testing of tryparsamide, A., III, 218.

See also Cohen, R.

Lauppe, W. See Briegleb, G.

Lauprecht, E. See Schmidt, J.

Laure, Y., explosion of hydrocarbon mixtures, B., 206.

Laurence, G. C., measurement of extra hard X-rays and γ-rays in roentgens, A., I, 428.

See also Henderson, G. H.

Laurent, G. See Ohman, V. Lauresco, C., utilisation of protein and the protein content of foods, A., III, 17. Proteolytic activity of pancreatic juice, trypsin, and crepsin, A., III, 68.

Laurie, A. P., restrainers and solvents used in cleaning old varnish from pictures, B., 62. Pigments, mediums, and technical methods of classical and mediæval painters, B., 261. Selective sorption of organic liquids by solid films of raw linseed and stand oil, B., 365. Re-fractive index of a solid film of linseed oil: rise in refractive index with age, B., 806.

Lauris, A. See Kondrateev, V. Lauritsen, C. C. See Bonner, T. W., Grane, H. R., Delsasso, L. A., and Fowler, W. A.

Laurs, L. See Schleicher, A. Lausen, C., occurrence of minute quantities of mercury in the Chinle shales at Lees

Ferry, Arizona, A., I, 102. Lauser, E., use of ceramic tiles in refrigerated enclosures, B., 1142.

Lausten, O. Sec Winge, O. Lauster, F., ultra-violet radiation in chemical industry, B., 360.

Lautenschlager, W. See Fischer, Hans. Lauter, W. M., and Stauff, A. M., stability and toxicity of a complex salt of silver chloride and thiocarbamide, A., II, 488.

See also Wingfoot Corp. Lauterbur, E. J. See Lauterbur, F. X. Lauterbur, F. X., and Lauterbur, E. J., water-softener regeneration, (P.), B., 1145.

Lautié, R., parachor. II., A., I, 67. Critical temperature of normal liquids, A., I, 71. Atomic parachors and chemical analogies; consequences, A., I, 349.

and Artières, S., critical product of pure normal liquids, A., I, 294.

See also Carrière, E., and Durand, J. F.

Lautsch, W. See Fischer, Hans.

Lava, V. G., Ross, R., and Blanchard, K. C., is vitamin- B_2 the accelerating factor in fermentation of sugar by propionic acid organisms? A., III, 35.

Lavergne, J., vacuum steam-heating systems, (P.), B., 739.

Laves, F., Hume-Rothery binding forces in metallic compounds, A., I, 74.

and Moeller, K., solid solution series magnesium-AgCd₃ in the ternary system magnesium-silver-cadmium, A., I, 609.

and Werner, S., crystal structure of Mg₂Zn₁₁ and its isomorphy with Mg₃Cu₇Al₁₀, A., I, 288.

Laves, F., and Witte, H., influence of valency electrons on crystal structure of ternary magnesium alloys, A., I, 23. X-Ray determination of structure of MgNi₂, A., I, 225. Lavietes, P. H., anaërobic ultrafiltration,

A., III, 447. Lavin, G. I., and Stanley, W. M., ultraviolet absorption spectrum of crystalline tobacco mosaic virus protein, A., III, 183.

Lavine, I. See Franta, W. Lavine, T. F., action of mercuric sulphate and chloride on cysteine, cystine, cysteinesulphinic acid (R·SO2H), and cysteic acid with reference to the dismutation of cystine, A., II, 180.

Lavino & Co., E. J. Sec Seil, G. E. La Voie, G. A., smelter, (P.), B., 147.

Lavollay, J., and Laborey, (Mme.) F., mathematical expression of growth of Aspergillus niger as a function of the magnesium concentration of the medium, A., III, 396. Effect of ascorbic acid (vitamin-C) on pigmentation of the mycclium of Aspergillus niger deficient in magnesium, and on development of

this fungus, A., III, 432.

Lavrentieva, A. V. See Golubev, I. F.

Lavrov, F. A., and Bestchastni, A. L., second pressure limit of inflammation for

spark ignition, A., I, 312.
Lavrov, V. P. See Obukov, A. P.
Law, C. H. See Carbide & Carbon Chem.

Corp. Law, D. V., and Powderco, Inc., grinding mill, (P.), B., 98.

Lawler, F. C., yeasts in the normal mouth, A., III, 270.

Lawrence, A. S. C., peptisation of aqueous soap solutions, A., I, 132. Internal solubility in soap micelles, A., I, 460.

See also Williams, G. Lawrence, C. A. See Cook, J. W. Lawrence, C. D. See Newington, F. H. Lawrence, C. K., Beekhuis, H. A., jun.,

and Atmospheric Nitrogen Corp., urea and nitrogen oxides, (P.), B., 1174. See also Kniskern, W. H.

Lawrence, E. O., and Cooksey, D., multiple acceleration of light ions to high speeds, A., I, 106.

Lawrence, J. C. See Dn Pont de Nemours & Co., E. I.

Lawrence, L., and Eichenouer, H., activated carbon aids sludge digestion at Liberty, N.Y., B., 1413.

Lawrence, R. E. See Grasselli Chem. Co. Lawrie, N. R., metabolism of protozoa. III. Properties of a proteolytic extract obtained from Glaucoma piriformis, A., III, 272.

Lawroski, S., Tongberg, C. O., Mazzarola, A. H., and Fenske, M. R., fractionation of Michigan straight-run naphthas. B., 869.

See also Tongberg, C. O.

Lawson, A., and Topps, J. E. C., aconitine. II. Relationship between aconitine and atisine and some degradation products of the latter, A., II, 527.

Lawson, D. E. See Burghoff, H. L. Lawson, J. L. See Omer, G. C., jun. Lawson, L. J., and Cork, J. M., radio-

active isotopes of indium, A., I, 594. Lawson, W. See Dodds, E. C. Lawson, W. E. See Du Pont de Nemours

& Co., E. I. Lawton, J., wax in impregnated paper cables, B., 642.

Lawton, W. E. See Plimpton, S. J.

Lay, H., micrographical and X-ray study of precipitation process in berylliumnickel alloys, B., 571. Etching effects with copper-aluminium alloys and the influence of impurities on their agehardening, B., 577.

See also Young, K.
Lay, T. C. See Chien, S. L.
Laymon, G. D., removal of stains from teeth, (P.), B., 850.

Lazar, A., Evans, J. M., and Associated Oil Co., stabilisation of [lubricating] oils, (P.), B., 1307.

Lazar, D. See Taschner, E. Lazarev, A. M. See Goldstein, E. J.

Lazarev, K., radioactivity of mud taken in 1932 from the Gniloje Sea, A., I, 154.

See also Kaschinski, P.

Lazarev, N. V., determination of chromium and manganese present together, A., I. 580.

and Broussilovska, A., relationship between activity, chemical structure, and physico-chemical properties of various anæsthetics, A., III, 477.

Lazareva, V. See Derjaguin, B. Lazareva, A. I. See Schemjakin, F. M. Lazareva, M. V. See Petrov, N. A.

Lazarus, A. S. See Salle, A. J.
Lazier, W. A. Sco Austin, P. R., and Du

Pont de Nemours & Co., E. I. Lazo, F. See Beauchamp, C. E.

Lazzareschi, C., addition of Schiff's bases to methylenecarbonyl compounds, A.,

II, 456.

Lea, C. H., influence of cod-liver oil in diet on susceptibility to oxidation of fat of pig, A., III, 420. Action of ozone on fats, B., 256. Oxidation of herring oil, B., 281. Influence of tissue and microbial oxidases on rancidity, B., 1262. Influence of tissue oxidases on rancidity; oxidation of fat of bacon, B., 1401.

See also Haines, R. B. Lea, D. E., Haines, R. B., and Coulson, C. A., action of radiations on bacteria. III. γ-Rays on growing and on nonproliferating bacteria, A., III, 319.

Sce also Haines, R. B.

Lea, F. C., effect of discontinuities and surface conditions on failure [of metals] under repeated stress, B., 1067.

Lea, F. M. light-weight concrete aggregates, B., 40. Special cements for mass-concrete structures, B., 347, 674. Measuring heat of hydration of cements, B., 915. Testing of puzzuol-

anic cements, B., 915. and Bessey, G. E., conductivity and $p_{\rm H}$ values of calcium hydroxide solutions

at 25°, A., I, 566.

See also Halcrow, W. T.

Lea, W. L., and Nichols, M. S., influence of phosphorus and nitrogen on the biochemical oxygen demand, B., 733.

Lea Recorder Co., Ltd., and Horner, J. W., fluid mixing systems, (P.), B., 512.

Leach, C. H., tubular test exchangers for oil-refining apparatus, (P.), B., 1016. Bubble tower apparatus, (P.), B., 1289.

Leach, R., parasitism and control of Armillaria mellea, A., III, 144.

Leach, R. H., use of silver solders, B., 246. and Handy & Harman, [silver-copperberyllium] alloy, (P.), B., 53. [Silver] alloys, (P.), B., 251. [Air-hardening gold] alloy [for pen nibs], (P.), B., ğ01.

Leach, R. H., and Terrey, H., reactions of scandium at the dropping mercury cathode, A., I, 245.

Leahey, A. See Wyatt, F. A. Leahy, M. J., carbon disulphide, (P.), B., 36. Cleaning high-sulphur gases, B., 106.

Leake, C. D. See Phatak, N. M. Leake, T. B. Sec Lagen, J. B. Leander, K. See Scheele, C. von.

Leaper, J. M. F., lime-soap formation in silk soaking and its treatment, B., 24.

Leaper, P. J., and U.S. Rubber Products, vulcanisation of rubber, (P.), B., 1246. Lease, J. G., Parsons, H. T., and Kelly,

E., comparison in five types of animals of the effects of dietary egg white and of a specific factor given orally or parenterally, A., III, 123.

See also Parsons, H. T.

Leatherock, L. E., McGhee, H. W., and Giertz, J. W., diastatic activity in connexion with flour-mill control, B., 609.

Leavenworth, C. S. See Vickery, H. B. Leaver, E. S., and Woolf, J. A., gold dredging in California and methods devised to increase recovery, B., 924.

Le Baron, R. F., and Standard Alcohol Co., sulphation of olefines, (P.), B., 117.

Lebbink, F. J. See Arkel, A. E. van. Lebeau, P. See Baxter, G. P. Lebedeff, Y. E. See Betterton, J. O.

Lebedenko, N., and Elian, J., volatile

metals [zinc], (P.), B., 250.
Lebedev, A. A., lead-bearing tourmaline from the Maly Khingan range, A., I, 334.

Lebedev, A. M. See Sergeev, L. I.
Lebedev, S. V., Chochlovkin, M. A., and
Kaletscheva, A. V., heat of combustion of isoprene and its polymerisation pro-

ducts, A., I, 31.
Lebedev, V. A., small laboratory cryptol furnace, A., I, 478. Adaptation of cylindrical cryptol furnaces for combustions, A., I, 478.

Lebedeva, A. I. See Freidlin, L. C. Lebedinski, V. V., action of ammonia on solutions of rhodium chloride, A., I, 95. Separation of rhodium from plat-

inum residues, A., I, 96. and Silin, S. F., nitro-pyridino-com-pounds of rhodium, A., I, 629.

Leberknight, C. E., and Ord, J. A., infrared absorption of dilute solutions of HCl and HBr, A., I, 236.

See also McKinney, D. S.

Lebeuf, cultivation of earth nut, B., 1103. Le Bihan, distribution of halogen derivatives of ethylene in the organism, A.,

Lebioda, J., calcium and potassium content of the blood, blood-plasma, and erythrocytes of the rabbit, A., III, 292.

Leblanc, A., comparison of nickel and chromium-nickel steels with ordinary carbon steels, B., 562.

Leblond, C. P., prolactin in mare's serum during pregnancy and lactation, A., III, 230.

and Allen, E., detection of prolactin (lactogenic hormone of the pituitary

gland), A., III, 230. and Noble, G. K., prolactin-like reactions produced by pituitaries of vertebrates, A., III, 437

See also Giroud, A. Le Bras, J. See Dufraisse, C.

Le Breton, E., physiological and biochemical significance of oxidation of ethyl alcohol in the organism, A., III, 261.

Le Brocq, L. E. See Sutton, H. Le Chatelier, C., use of gas producer in metallurgical processes, B., 746.

Lechner, R., processes in synthesis of yeastsubstance and possible yields in yeast cultivation, A., III, 33. Processes in synthesis of yeast cell-substance, and maximal theoretical and practical yeast crops on sugar solutions, B., 965. See also Fink, H.

Le Chuiton, F., Sabrazès, J., Berge, C., Pennaneac'h, J., and Dubreuil, J.. effect of tuberculin and of acetone and methyl-alcoholic extracts on the pathogenic power of BCG and the action of these substances in vivo, A., III, 302.

Leckie, A. H., Raman spectrum of deuterosulphuric acid, A., I, 62.

See also Bailey, C. R.

Leclerc, C., problem of low-temperature carbonisation of coals, B., 7.

Leclerc, E., and Haux, R., rare gases, B., 1335.

Le Clerc, G. See Lefebvre, H.

Le Clerc, J. A. See King, F. B.

Leclêre, A., spectrophotometric determination of the $p_{\rm H}$ of a coloured medium (without standard), A., I, 196.

Leclerg, L., determination of iodine in organic medicaments, B., 1406.

Lecomte, J., infra-red absorption spectra and modes of vibration of organic compounds containing an ethylenic linking, A., I, 112. Infra-red absorption spectra of mono- and di-substituted derivatives of benzene; sym-

metry of benzene, A., I, 344.
and Delaby, R., infra-red absorption
spectra and ethylenic compounds. IV. Types of molecular vibration, A.,

I, 394.

Volkringer, H., and Tchakirian, A., infrared and Raman spectra of chlorobromomethanes, A., I, 443.

See also Delaby, R., and Emschwiller, G.Lecoq, L., bismuth campholate, (P.), B.,

291.

Lecoq. R., alimentary disturbance caused by uric or oxalic acid in diet of the pigeon, A., III, 23. Alimentary unbalance produced by protein decomposition products, A., III, 90. Rôlo of the disintegration products of muscle in production of alimentary and humoral disequilibrium, A., III, 93. B. coli and alimentary equilibrium, A., III, 225. Is tho alimentary unbalance caused by fatty acids of high m.p. (above 50°) of the same order as that produced by liquid fatty acids at body temperature? A., III, 260. Sodium salts and [alimentary] disequilibrium, A., III, 308. Effect of iodine and inorganic and organic iodo-compounds on osseous lesions of experimental rickets, A., III, 380. Alimentary disturbance produced by fatty acids and soaps, A., III, 384. Is castor oil the cause of alimentary disequilibrium as the result of its purgative action bringing about a partial or total inhibition of resorption? A., III, 389.

and Allinne, M., excess of fats in the ration as a limiting factor in growth

of rats, A., III, 127

Courtois, Jacques, and Garnier, H., variations in blood-urea and -chloride after ingestion of fibrin, ovalbumin, and derived peptones, A., III, 84.

Lecoq, R., and Duffau, R., influence of diet unbalanced with respect to carbohydrate on composition of pigeon muscle, A., III, 127.

and Gallier, R., action of iodine compounds on bone calcification in experimental rachitic rats, A., III, 125.

and Joly, J. M., influence of carbohydrates, fats, and proteins on respiratory coefficient and basal metabolism of man at rest and in thermal equilibrium, A., III, 17. Respiratory changes in pigeons due to alimentary disequilibrium of carbohydrate origin, A., III. 302.

and Mennier, A., is fixation of chlorine constant in injured tissues during surgical operation? A., III, 93.

Lecordier, G. See Kling, A. L'Ecuyer, P. See King, F. E. Leddell, W. A. See Gardner, E. D.

Lederer, E., reaction for unsaturated hydrocarbons or their peroxides, A., II, 479. Lead-poisoning risks in type-

setting, A., III, 351. Lederer, E. A., and Rosanova, V., vitamin-A of fish-liver oils. I. Abnormal Carr-Price reaction, B., 697.

See also Gillam, A. E.

Lederer, E. L., viscosity of binary mixtures, A., I, 126. Formula for nuclear distances and energies of separation, A., I, 349. The viscosity-temperature function, A., I, 558.

Lederer, E. R., lubricating oil, (P.), B.,

Lederer, J. A., metabolism of glycerol and hepatic function, A., III, 212

Lederer, L. G., and Crandall, L. A., jun., effect of calcium and parathormone on sernm-calcium in normal, Eck-fistula, and gastrectomised dogs, A., III, 403. Lederle, E., red pigments, (P.), B., 264.

Ledinegg, M., calculation of temperature gradient in [combustion chamber of] a furnace fired with pulverised fuel or oil, B., 1292.

Leditschke, H. See Borsche, W., and Hahn, G.

Ledoux, E., variations in the heat of evaporation at constant temperature, A., I, 353. Adiabatic adsorption by silica gel, B., 299.

Ledoux, P., molecular dissociation in a stellar atmosphere, A., I, 547.

Ledrut, J., and Hauss, L., permanganatometric determination of nickel, A., I, 377.

Lee, A. W. See Brooke, W. J.

Lee, C. E., and Beacon Milling Co., pelleted

feed, (P.), B., 1406. Hamilton, S. W., and Henry, C. L., effect of [feeding] supplementary iodine on egg production and mortality in the laying flock, B., 725.

Lee, C.O. See Kaufman, K. L., and Tisher, H. L.

Lee, \overline{D} . D. See Libby, W. F.

Lee, D. H. K. See Gregory, R. A.

Lee, E. See Tolansky, S.
Lee, F. E., Lepsoe, R., Chapman, F. H.,
and Consolidated Mining & Smelting Co. of Canada, recovery of sulphur dioxide in a highly concentrated form from mixed gas, (P.), B., 36.

Lee, $H. \ \widetilde{C}$. See MacCaughey, W. J. Lee, H. N., microscopical mechanism of rosin sizing [of paper], B., 227. Examination of paper, B., 770.

Lee, Hak S., non-protein nitrogen in blood. III. Influence of fluorine on the nonprotein-nitrogen of rabbit's blood, A. III, 22. Carbohydrate metabolism of the frog. I. Blood-sugar of the frog in summer. II. Glycogen in the liver of the frog in summer, A., III, 212.

Lee, Harry S., apparatus for manufacturing, treating, and cooling cement clinkers, (P.), B., 142. Apparatus for manufacturing and treating cement clinkers, (P.), B., 142.

Lee, J., [derivatives of cyclotetramethylenepyrazole and their molecular compounds with substituted barbituric acids], A., II, 433.

See also Christiansen, W. G.

Lee, J. van der. See Verkade, P. E. Lee, J. A., silver, gold, tantalum, and the platinum metals, B., 575. Versatility in

dye equipment, B., 762.

Lee, K., and Chen, J. S., composition of ether-extractable and ether-non-extractable lipins in blood-serum, A.,

Chow, B. F., and Wu, H., comparison of immunological activity of antibodies of pneumococcus, type I, from dif-

ferent animals, A., III, 116. See also Chow, B. F., and Liu, S. C. Lee, K. S., colloidal metal absorption by tissue cells. I. Influence of serum, serum-albumin, and serum-globulin on metal absorption by surviving rabbit liver. II. Influence of various lyophile colloids on metal absorption of tissue cells in surviving rabbit liver. III. Influence of lyophile colloids on metal absorption of tissue cells of surviving spleen and kidney, A., III, 266.

Lee, L. See Chesters, J. H. Lee, M., and Ayers, G. B., composition of weight-loss and the nitrogen partition of tissues in rats after hypophysectomy,

A., III, 39.

Lee, M. F. See Churchill, H. V. Lee, O. I., new property of matter: reversible photosensitivity in hackmanite from Bancroft, Ontario, A., I, 204.

Lee, P. See Erickson, B. N.

Lee, P. J. van der, and Gorter, A., influence of nutritive conditions on urca-forming enzymic complex of rat liver, A., III,

Lee, R. C. See Carpenter, T. M. Lee, R. K., McCortney, W. J., and Chrysler Corp., bonded rubber and metal articles,

(P.), B., 374. Lee, S. T., and Kung, W. C., preparation of chromic acid and chrome plating, B.,

, toxic action of metals on Balanus, A., III, 138.

Lee, W. C. Sco Thomson, K. B., and Wright, N.

Lee, W. M., Clark, L. H., and Sharples Solvents Corp., production of derivatives of hydroxyaryl compounds, (P.), B., 1024.

and Sharples Solvents Corp., esterification of olefines, (P.), B., 526.

Lee, W. V., film-forming oils, B., 585. Leech, J. G. C. See Brammall, A. Leeds, R. E. See Gen. Electric Co.

Leeds & Northrup Co. See Dike, P. H., Fredericks, G. E., and Harsch, J. W. Leeds University, Institution of Gas En-

gineering, removal of sulphur compounds from town gas down to 10 grains per 100 cu. ft., B., 8.

Léemann, A. C., hydrocyanic acid in gases, A., III, 243. Eradication of gifblaar (Dichapetalum cymosum), B., 711.

Leeming, J. H. J. See De Jong, A. Leendertse, J. J. See Waterman, H. I. Lefand, I. L., and Serov, V. V., magnesian Portland cement, B., 784.

Le Fanu, B., auxin and correlative inhibition, A., III, 50.
Lefebure, V. Sco Imperial Chem. In-

dustries.

Le Febvre, C. C. See John, Hans. Lefébvre, F. See Bacq, Z. M.

Lefebvre, H., and Faivre, R., oxidation of coal, B., 102.

and Le Clerc, G., thermomagnetic study of iron catalysts used in the synthesis of hydrocarbons by the Fischer

process, A., I, 90.
Fèvre, (Mrs.) C. G., and Le Fèvre, R. J. W., moments of coumarin and its 3-phenyl derivative and of substituted y-pyrones, A., I, 499. Structure of xanthone and orientation of its aand β -dinitro-derivatives, A., II, 161. See also Hughes, E. D.

Le Fèvre, M. L., and Hodge, H. C., chemical composition of human teeth; effect of physiological stimuli, A., III, 294.

Lefèvre, P., fat content of milks from various [French] regions, B., 1260.

Le Fèvre, R. J. W., polymorphism of chalkone, A., I, 450.

and Vine, H., configurations of the isomeric diazocyanides, A., II, 376. See also Hughes, E. D., and Le Fèvre,

(Mrs.) C. G.

Leffingwell, G. See Lesser, M. A. Leftwich, R. F., and Greenawalt Incinerating Corp., disposal of refuse, (P.), B., 850. Legat, H., magnetically hard, low-carbon

nickel-copper steels, B., 1215. See also Schmidt, M.

Legé, E. G. M. R., continuous distillation retort, (P.), B., 306.

Léger, E., niquine and niquidine, A., II, 125. Determination of morphine in opium, B., 1132.

Legg, V. E. See Ellwood, W. B. Leggett, A. See Kemp, W. C. Le Goff, J. M. See Duval, R.

Legoix, L. See Weber, L. I.

Legoux, P., magnesian series and the "supracrustal" rocks in the west of the Côte d'Ivoire, A., I, 586.

Legrain, N., viscosity of ethylcellulose, B., 767.

Le Grand, A., Cousin, J., and Lamidon, P., centre of carbohydrate metabolism in the dog deprived of humoral and cerebral sugar regulators, A., III, 212. Bulbar centre of carbohydrate metabolism in dogs deprived of their humoral sugar-regulating mechanism, A., III, 476. Legrand, G., blood-polypeptides in the pregnant woman and the feetus, A., III, 206.

Legraye, investigation of distribution of ash constituents in coals by means of X-rays; studies on thin sections, B., 513. A sapropelitic coal of the boghead type from the Campine (Belgium) coal seam, B., 513.

Lehberg, F. H., and Geddes, W. F., flax. III. Refractometric method for determining the iodine value of raw linseed oil, B., 1365.

Lehigh University. See Jong, J. S. Lehký, R., calculation of the driving power for [sugar] cane-crushing mills, B., 716. Lehman, A. J., curare-like action of Erythrina americana, A., III, 27.

and Newman, H. W., comparative intravenous toxicity of some monohydric saturated alcohols, A., III, 426. Propylene glycol; rate of metabolism, absorption, and excretion; deter-

mination in body-fluids, A., III, 476. Richardson, A. P., and Hanzlik, P. J., determination of bismuth in bodyfluids and tissues, A., III, 504. See also Newman, H. W.

Lehmann, F., composition and value of milling offals from rye and wheat, B., 1402.

Lehmann, Hans, and Endell, K., whiteware clay, B., 549.

Lehmann, Hermann, and Needham, D. M., competition between phosphorylating enzymes in muscle extract, A., III,

See also Needham, J.

Lehmann, J. E., effect of changes in potassium-calcium balance on action of mammalian A nerve fibres, A., III, 389. Effect of changes in $p_{\rm H}$ on action of mammalian A nerve fibres, A., III, 389.

Lehmann, K. H., action on urinary quotients of mixtures of two plant proteins of different metabolic action, A., III, 17.

Lehmann, Walter, [gas-filled] electric-discharge apparatus [with mercury cathode], (P.), B., 55. [Lead-in for] electric-discharge apparatus, (P.), B., 55.

Lehmann, Wilhelm, rubber-lined acid pumps, B., 196. Glandless pumps in

the fat industry, B., 461. Lehmann, W. J. See Roschen, H. L. Lehmann & Voss & Co., preparing old rubber for further use, (P.), B., 67. Prevention or elimination of froth in the manufacture of paper, (P.), B., 129. Treatment of lecithin, (P.), B., 727. Rubber products, (P.), B., 1379. Lehmstedt, K., [acridones], A., II, 117. and Schrader, K., acridine. XVI. Preparent of the part of the state of the st

aration of 2- and 4-substituted acridones from 3'-substituted diphenylamine-2-carboxylic acids. Syntheses in the acridone series, A., II, 261, 389.

Lehnert, R. See Sustmann, H.

Lehr, improvement of the keeping quality of marine fish with ice, B., 613.

Lehrer, oxidation of drying oils, B., 944. Use of chlorinated diphenyls in lacquer manufacture, B., 1088.

Lehrman, A., Adler, Edward, Freidns, J., and Neimand, M., liquidus curve and surface of the systems lithium and calcium nitrates and calcium, lithium, and potassium nitrates, A., I, 137.

Lehrman, L., and Kabat, E. A., fatty acids associated with banana starch,

A., III, 367.

Manes, M., and Kramer, J., organic reagents in qualitative analysis. III. Analysis of the common metals of the alkaline-earth group and magnesium using 8-hydroxyquinoline, A., I, 375. See also Curtman, L.J.

Lehwirth, S., changes in inorganic phosphate content of blood in pregnancy, A., III, 206.

Leiber, F., copying with subtractive threelayer colour process, B., 395. Sensitometry of three-layer colour films, B., 731. Leiber, G., course of reactions in basic open-hearth furnaces, B., 557.

Leibov, Z. M., comparison of methods for determination of small amounts of CrO₃, A., I, 329.

Leibovitch, B., use of guaiacum tincture in test for control of milk pasteurisation, B.,

Leibson, R. G., Likhnitzky, I. I., and Sax, M. G., oxygen transport of the feetal and maternal blood during pregnancy, A., III, 109.

Leibusch, A. G. See Karshavin, V. A. Leicester, F. D. See Imperial Chem. Industries.

Leichter, H., Umbach, Guido, and Nord, F. F., cryolysis, diffusion, and particle size. IV. Caseinogen, A., I, 409. See also Günther, P., and Nord, F. F.

Leider, H., calorific value of pure coal, B.,

Leiderman, C. A. See Opotzki, V. F. Leiflang, K. W. H. See Kooijmans, L. H. L. Leifson, E., effect of sodium sclenite on growth of bacteria and its use as a basis for enrichment media for isolation of typhoid bacilli from fæces, water, milk, etc., A., III, 359. Leigh, E. See Hodgson, H. H.

Leigh, H., manufacturing [moulding and pressing] clay and marl products such as bricks, tiles, etc., (P.), B., 347. Leigh-Smith, A. See Richardson, H. O. W. Leighton, A., and Leviton, A., relationship

between temperature and overrun in the whipping of ice-cream mixes, B., 972. Leighton, P. A., and Burnham, J., effects of

sulphuric acid and of zinc chloride on the main Raman band of water, A., I, 167.

Levanas, L. D., Blacet, F. E., and Rowe, R. D., photolysis of aliphatic aldehydes. IV. n- and iso-Butaldehydes, A., I, 627.

See also Cross, P. C., and Giese, A. C. Leighton, W. B. See Furnas, C. C.

Leighty, J. A., and Corley, R. C., aminoacid catabolism. IV. Fate of certain a-amino-acids subcutaneously injected into normal dogs, A., III, 421.

Leihener, O., importance of grain size in steel, B., 560.

Leilich, K. See Badum, E.

Leimu, R., rates of reaction of aliphatic acid halides, A., II, 272.

Lein, A., relative effectiveness of iodine in thyroxine, di-iodotyrosine, and potassium iodide in inducing metamorphosis in amphibia, A., III, 308. Augmentation of the gonadotropic hormone from the pregnant mare, A., III, 438.

Leinert, F. See Abderhalden, E. Leinhardt, H. F. See Aubel, C. E. Leipert, T., blood-iodine, A., III, 452.

Leipunski, A. I., absorption of slow neutrons at low temperatures, A., I, 276. and Rosenkevitsch, L., change in action of photo-neutrons on silver on passing through a layer of copper, lead, or beryllium, A., I, 107.

Rosenkevitsch, L., and Timoshuk, D., scattering of photo-neutrons by protons, A., I, 211. Scattering and absorption of photo-neutrons from beryllium, A., I, 339.

See also Fomin, V.

Leipunski, E., kinetics of the activated adsorption of hydrogen on polished nickel, A., I, 129.

Leiser, H., electrolytic production of metal [e.g., nickel] plates, (P.), B., 253. Leisle, E. G. See Dumanski, A. V.

Leitch, J. D., radium: discovery, properties, preparation, and uses, A., Î, 41. See also Braaten, E. O.

Leitch, P. A., and Mills, M. W., apparatus for screening sewage or similar liquids and disintegrating the solid matter therein, (P.), B., 1282.

Leitch, R. H., rennet, B., 971.

Leiterer, L., paramagnetism of complex chromium salts, A., I, 556.

Leitgebel, W., vapour pressure, thermal dissociation, and affinity in metallurgy, B., 1218.

Leith, T. B. See Weakley, C. E., jun. Leithe, W., rapid refractometric methods in analysis of fats and foodstuffs, B., 364. Refractivity and the stand-oil problem, B., 365. Refractometric determination of fusel oil in brandy, B.,

and Heinz, H. J., the benzine point as new constant for castor oil, B., 463. Refractometric determination of fat

in cacao products, B., 615.

and Lamel, H., refractometric determination of oil in castor seed, B., 257. Refractometric determination of fatty acids in Turkey-red oil, B., 804. Refractometric determination of fat in oil seeds (light petroleum method), B., 938.

Leitner, F. See Böhler Gebr. & Co., A.-G. Leitz, C. F., and Kobe, K. A., measurement of $p_{\rm fl}$ of sulphite waste liquor with

the glass electrode, B., 26. Leitz Ges.m.b.H., E., optical equipment for bacteriological examination in the dairy laboratory, B., 971.

and Schäfer, Willy, optical apparatus for measuring the quantity of dust in air or for similar purposes, (P.), B., 506. Leizerovitsch, G., rational preparation of

copper smelter charge, B., 47. See also Gutman, M.

Lejay, P., variations in ozone in the atmosphero in the neighbourhood of Shanghai, A., I, 584.

Lejeune, G., and Jacquet, P. A., inhibition of etching of iron in acid solution, A., I. 42.

Lejkina, B. N., and Novoselova, A. V., equilibria in the system BeCl2-HCl-H2O, A., I, 243.

Leland, J. P. See Palmer, W. W. Leloir, L. F., and Dixon, M., action of cyanide and pyrophosphate on de-

hydrogenases, A., III, 311. See also Edson, N. L., and Green, D. E. Leltschuk, S., and Popova, A., alcoholysis of esters. I., B., 1018.

Lelu, P., value of Hanke and Koessler's method for determination of glyoxaline in urine, A., III, 10. Metabolism of glyoxaline. II. Comparative glyoxalinuria of carnivorous, herbivorous, and omnivorous animals. III. The digestive or metabolic origin of glyoxaline in the urine of various animals. IV. Glyoxalinuria in exogenous protein metabolism, A., III, 129, 259, 305.

See also Terroine, E. F.

Lely, U. P., gas models, A., I, 236. Lemaitre, G., longitude effect and the asymmetry of cosmic radiation, A., I, 440.

Manneback, C., and Tchang, Y. L., calculation of the frequencies and modes of vibration of the monodeuterethylene molecule, A., I, 398.

See also Delfosse, J. M.

Lemale, P. C., and Yarrow, W. S., refrigeration, B., 399. Leman, V. R. See Bolotov, B. A.

LeMar, J. D., and Myers, J. T., bacterio-phage. I. Extraction with ether. II. Artificial production of a specific lytic agent behaving like bacteriophage, A., III, 147.

Lemarchands, M., and Pierron, P., action of bromine on yellow mercuric oxide, A., I, 473.

Lemberg, R., Cortis-Jones, B., and Norrie, M., oxyporphyrin-hæmatin compound as intermediate between protohæmatin and verdohæmatin, A., III, 336. Coupled oxidation of ascorbic acid and hæmchromogens, A., III, 364.

Wyndham, R. A., and Henry, N. P., liver aldehydrase, A., III, 97.

Lembke, A., and Claussen, M., efficiency of pasteurisation of milk in the hightemperature-short-time method, B., 970. Le Mesurier, L. J., Diesel engines and Diesel oils, B., 109.

Lemétayer, E., hæmolysin and antihæmolysin of tetanus toxin, A., III, 6. Neutralisation of the tetanus toxin hæmolysin by normal sera, A., III, 6. See also Ramon, G.

Lemetre, G. See Bonino, G. B.

Lemmerman, P. C. See Grasselli Chem.

Lemmerman, R. G., and Ferro Eng. Co., moisture proofed moulded article, (P.),

Lemmon, D. W., woodhouseite, a new mineral of the beudantite group, A., I,

Lemoigne, M., nitrogen metabolism of plants, A., III, 237.

Monguillon, P., and Desveaux, R., characterisation and micro-determination of nitrates, A., I, 261. Biological rôle of hydroxylamine. VI. Presence of volatile compounds of hydroxylamine in fresh leaves of higher plants, A., III, 330. Reduction of nitrous acid to hydroxylamine by higher plants; rôle of ascorbic acid, A., III, 408.

Nuret, H., and Dupic, H., comparison of the results given by the extensimeter and bread-making trials, B., 1398.

See also De Guillebon.

Lemon, J. M., Griffiths, F. P., and Stansby, M. E., metal extractor for laboratory use, A., I, 50.

Stansby, M. E., and Swift, C. E., oat flour as an antioxidant in the saltmackerel industry, B., 1124. See also Stansby, M. E.

Lemon, W. S., and Higgins, G. M., tissue reactions of the lung to intratracheal injection of particulate sericite, A., III,

Lemonde, H., diffusion, viscosity, and intermolecular action in binary mixtures of liquids, A., I, 295. Variations in viscosity with concentration in binary liquid mixtures, A., I, 405.

Lemos, A. See Cheramy, P. Lemoyne, S. See Colin, H.

Lenartovitsch, E. T. See Joffe, J. S.

Lench, A. See Burrows, G. J. Lenchold, V., determination of nonnitrated hydrocarbons in nitroxylene, B., 1017.

Lendzian, H. See Schlnbach, H. H. Lenfeld, J., and Hökl, J., arresting the formation of nitrite in pickling brine, B.,

Lengyel, L., apparatus for continuous preliming [of raw beet juice], B., 1109. Lenher, S., and Smith, J. E., diffusion of dyes, B., 336.

See also Du Pont de Nemours & Co., E. I. Lennard-Jones, J. E., electronic structure of polyenes and aromatic molecules. I. Nature of links by the method of molecular orbitals, A., I, 286. Migration and aggregation of atoms on solid surfaces, A., I, 551.

and Devonshire, A. F., interaction of atoms and molecules with solid surfaces. VI. Behaviour of adsorbed helium at low temperatures. VII. Diffraction of atoms by a surface, A., I, 286.

and Turkevich, J., electronic structure of polyenes and aromatic molecules. II. Nature of the links of some aromatic

molecules, A., I, 286.

Lennerstrand, A., action of phosphate on oxidation and phosphorylation in the apozymase system poisoned by fluoride, A., III, 98. Coupling of respiration and phosphorylation of adenylic acid in the hæmolysatc of horse erythrocytes, A., III, 289.

Lennette, E. H., and Campbell, D. H., permeability of the blood-central nervous system barrier to sodium bromide in experimental poliomyelitis, A., III, 462.

and Reames, H. R., permeability of blood-central nervous system barrier in experimental poliomyelitis as determined by the nitrate test, A., III. 462.

Lennox, C. E., and Sandtner, J. S., alkalis in the wash wheel, B., 58.

Lennox, F. G., silver chromate in a gelatin sol as a "spot" test reagent, A., I, 43.
Lenoir, J., electrodes for electric arc-

welding, (P.), B., 1362.

Lenti, C., osmotic pressure of colloids of the vitreous humour, A., III, 120.

Lentz, C.J. See Bnnce, K.H. Lenz, W. See Meerwein, H.

Lenzart Co. See Stephenson, A.W.

Lenzer, A. Seo Feigl, F.

Leo, H. T., pectous product, (P.), B., 496. Leo. M., radicals with several tervalent carbon atoms, A., II, 406. See also Hessenland, M.

Leon, H., and Slattenschek, A., effect of prior strains on strength of cast iron, B., 558.

Leonard, C. S. See Barthen, C. L. Leonard, M. E. See Lucia, S. P.

Leonard, S. L., changes in relative amounts of follicle-stimulating and luteinising hormones in pituitary of the female rat, A., III, 362.

Hisaw, F. L., and Fevold, H. L., pituitary hormone antagonism, A., III, 73. See also Sager, V.J.

Leonard, V. See Pollard, J. D., and Wesson, L. G.

Leone, P., machines for extraction of essential oils of acid fruits, B., 392. and Bontà, M., production of ammonium

sulphate without the use of sulphuric acid, B., 339.

Cipolla, F., and Vinti, S., bituminous tripolites of Sicily, A., I, 156.

Leong, P. C., vitamin B_1 in the animal organism. I. Maximum storage of vitamin- B_1 in the rats' tissues. II. Metabolism of vitamin-B, in rats, A., III, 188. Destruction of vitamin- B_1 in blood, A., III, 404.

Leong, P. C., and Harris, L. J., antineuritic potency of synthetic and natural crystalline vitamin-B, determined by the "bradycardia" method, A., III, 231. Vitamins in human nutrition; vitamin- B_1 , and the "brown versus white bread problem." II., A., III, 280.

See also Harris, L.J.Leonida-Ioan, C. See Ionescu-Mihaiesti, C.Leonteev, H., and Markova, K., nutritive value of muscle proteins of certain invertebrates, B., 613.

and Truschina, E., biochemistry of the lower organisms. I. Protective action of casein in poisoning of bacteria by nicotine, A., III, 148.

Leonteev, I., effect of feeding dogs with vegetable "proto-acid," A., III, 382.

and Gincharev, G., Stanck and Hausmann numbers of some " proto-acids," A., III, 374.

and Markova, K., racemisation curves of proteins of muscles of invertebrates, A., III, 199.

Leonteva, A. A., thermal expansion of binary systems in the molten state, A., I, 126, 295. Thermal dilatation of the system K₂B₄O₇+B₂O₃ in the fused state, A., I, 177.

See also Derjaguin, B. V., Iljin, B. V., and Volarovitsch, M. P.

Leontovitsch, M. A., theory of absorption of sound in polyatomic gases, A., I, 293. Leopold, H. See Haehn, H.

Leopoldi, G. See Fischer, Hans.

Lepage, G., dyeing of viscose rayon in the mass [before spinning], B., 1039.

Le Pelley, R. H., and Sullivan, W. N., toxicity of rotenone and pyrethrins, alone and in combination, B., 624.

Lepeschkin, V. V., advances in colloid chemistry of protoplasm in the last ten

years. I.—III., A., III, 157. Lepeschkov, I. N. See Kurnakov, N. S., and Nikolaev, V. I.

Lépingle, M., use of mullite refractories in boilers, B., 241. Manufacture of special refractory products in Belgium, B., 1341.

Lepkovsky, \hat{S} ., and Jukes, \hat{T} . H., response of rats, chicks, and turkey poults to crystalline vitamin-B2 (flavin), A., IIĬ, 405.

See also Fouts, P. J.

Le Plac, E., recent improvement of African oil palms and palm oil production in Belgian Congo, B., 826.

Lepointe, R., heat of adsorption of gas by carbon at low temperature (-183°), A.,

Lepp, H., gases in metals and their effect, B., 1218. Mechanical properties of tin bronzes, B., 1221.

Lepper, W., determination of potassium in mixed fertilisers, B., 377. Distillation method of determining acetic and butyric acids in silage, B., 838.

Leppla, P. W. See Clark, G. L.

Leprince-Ringuet, L., interaction with matter of high-energy particles, electrons from various sources, and cosmic-ray particles, A., I. 106.

and Crussard, J., study of cosmic-ray particles of high energy in the magnetic field of the Bellevue electromagnet, A., I, 390.

See also Crussard, J.

Lepsius, R., chemical basis of the mode of action of fire-proofing materials [for wood], B., 40.

Lepsoe, R. See Lee, F. E.

Le Que, F. L., corrosion-resistant steels in sulphite pulping, B., 226.

Le Quéré, H., apparatus for detecting pyroelectricity, A., I, 152.

Lerch, W., and Brownmiller, L. T., method for approximating the glass content of Portland cement clinker, B., 915.

Lerche, M., infection of food-stuffs by birds. B., 492. Value of meat in national nutrition and health, B., 492. Effect of addition of skim-milk powder and of alimentary casein on quality and keeping properties of sausages, B., 973.

Lerer, M., synthesis of alkylated polycyclic

aromatic hydrocarbons, A., II, 55.

See also Hugel, G.

Lerman, F., deriving expressions for the first partial derivatives of thermodynamic functions, A., I, 607.

Lerman, J. See Salter, W. T. Lerner, I. M., Gregory, P. W., and Goss, H., heterogony of glutathione content of new-born rabbits, A., III, 119.

Leroux, H. See Guillemet, R.

Leroux, L., allantoic acid in the leaves of Coryllus avellana, A., III, 446.

Leroy, A. See Portevin, A. Leroy, A. M., is lysine the fundamental factor which limits production of milk in cases of deficient nitrogen feeding? A., III, 420. Rapid determination of total protein in milk, B., 489. Methods of milk control in the selection of early sheep varieties, B., 838. Sec also Massé, A.

Lesbre, M., halogeno-organie lead com-

pounds, A., II, 372.

Lesiukova, A. A. See Levitski, A. J. Leslie, R. T., hydrocarbons in the fraction of a Mid-Continent petroleum dis-tilling between 115° and 124°, B., 203. and Heuer, W. W., crystal behaviour of

hydrocarbons, A., I, 448. Lesničenko, K., determination of nitrogen in nitrates and nitric esters in the Lunge nitrometer and by Schlösing's method.

I.—III., A., I, 148.

Lespagnol, A., and Bruneel, J., iodine value of cinnamic [acid] derivatives, A., II,

and **Dupas**, J., preparation of substituted xanthones and xanthhydrols, A., II, 205.

Less, F. W. See Norton, A. J.

Lesser, M. A., and Leffingwell, G., glycerol in plastics, B., 1369.

Lessheim, H. See Bhatnagar, S. S. Lesslie, M. S. Seo Bennett, G. M.

Lester, H. H., radiographic inspection [of metals], B., 801.
Lester, W. R., new borax products, B.,

132.

Lestra, H. See Massot, A. Lesuk, A. See Harrow, B.

Lesure, A., polypeptides and amino-acids in the organism; characterisation and methods of determination, A., III, 340. Letonoff, T. V., micro-colorimetric determination of chlorides in blood and urine,

Letort, M., definition and determination of the two orders of a chemical reaction, A., I, 365. Homogeneous thermal decomposition of acetaldehyde in the gaseous phase, A., I, 416, 522. Influence of traces of oxygen on kinetics of thermal decomposition of gaseous acetaldehyde, A., I, 571.

Letters, C., consolidation or waterproofing of mortar, (P.), B., 1345.

Lettré, H., stereochemistry of sterols and related natural substances, A., II, 191. Phenomenon of partial racemism as the heuristic principle of the interpretation of physiological specificity observations, A., III, 348.

Barnbeck, H., Fuhst, W., and Hardt, F., isomorphism of organic compounds.

II. A., II, 339.

and Müller, M., transformations of cholestanetriol, A., II, 455.

Letzig, E., detection of pectin in milk products, B., 387.
Leuchs, H., Strychnos alkaloids. XCIV.

Oxidation of strychnine to monohydroxystrychnine, the so-called ψ -strychnine, A., II, 435. [Strychninolono and its derivatives], A., II,

and Beyer, H., Strychnos alkaloids. XCIII. The acid $C_{15}H_{18}O_6N_2$ from benzylidenedihydrobrucine, A., II,

and Grunow, H., Strychnos alkaloids. XCII. Isomerisation of the acid. C₁₈H₂₂O₄N₂, and oxidation of dihydrobrucine, A., II, 172.

Grunow, H., and Tessmar, K., Strychnos alkaloids. XCV. Transformations of

ψ-strychnine, A., II, 435. and Höhne, H., Strychnos alkaloids. XCI. Isomerisation of bromo- and of benzyldihydro-strychnine, A., II, 39.

Leudeke, V. D. See Hixson, A. W. Leuenberger, H. See Ruzicka, L. Leukel, R. W., seed treatment with oats naturally and artificially inoculated with smuts, B., 1251.

See also Hurst, W. M.

Leulier, A., and Bernard, A., variation in weight and water and potassium contents of nervous system at birth and in adults, A., III, 294.

Bérnard, G., and Loisy, P., [pharma-cology of] gold salts, particularly strontium aurothiopropanolsulphonate, A., III, 177.

Revol, L., and Paccard, R., potassium in the milk of normal women, A., III,

Leun, A. V., insulating refractory brick, B., 1341.

Leung, W. K. See Yen, C. A.

Leuschen, M. E., Kunnerth, B. L., Kramer, M. M., and Riddell, W. H., vitamin-A activity of butters determined by various methods, A., III, 493.
Leutner, R. See Skrabal, A.
Leutwyler, F. See Treadwell, W. D.

Levaditi, C., Paic, M., and Krassnoff, D., ultrafiltration and approximate dimensions of the virus of Nicholas-Favre disease, A., III, 72. Approximate size of the standard (Paris) virus of rabies and the virus of street rabies of dogs, A., III, 72.

Levaillant, R., esters of chlorosulphonic, sulphurous, and sulphuric acids, A., II,

LeVan, E. E., wear of metallic surfaces, B., 1067.

Levanas, L. D. See Leighton, P. A.,

and Young, W. G.
Levando, J. I., and Vasilevski, P. F. determination of elasticity of metals by methods of radio technique, B., 454. Levantzova, N. S. See Utevski, A. M. Levaschevitsch, M. See Danilov, V. Levene, H. H. L. See Boots Pure Drug

Co.

Levene, P. A., and Christman, C. C., catalytically induced reaction [of glucosamine] resembling the Cannizzaro reaction, A., II, 447.

and Compton, J., synthesis of d-allomethylose by a series of Walden alkaline inversions accompanying hydrolysis of isopropylidene-l-rhamnose 5-p-toluenesulphonate, A., II, 6. Preparation of furanose derivatives of pentoses; isopropylidene-l-arabo-furanoside, A., II, 6. Synthetic nucleosides. V. Theophylline-d-allomethyloside, A., II, 215.

and Kreider, L. C., structure of pectin polygalacturonic acid, A., II, 367. Oxidation and hydrolysis of polygalacturonide methyl ester to l-tartaric acid, A., II, 442. Ring structure of a-methyl-d-galacturonide and its derivatives, A., II, 442. Conversion of uronic acids into corresponding hexoses. I. Conversion of 2:3:4-trimethylmethyl-d-galacturonido methyl ester into 2:3:4-trimethylmethyl-d-galactoside, A., II, 484. and Kuna, M., preparation of crystalline

β-4-glucosidosorbitol and its mono-

methyl derivative, A., II, 318. and Mardaschev, S., correlation of configuration of norleucine to β -aminohexane, A., II, 139. Configurative relationships of the aliphatic and aromatic amino acids, A., II, 192.

and Mehltretter, C. L., lysolecithin and tosylglycerides, A., III, 456.

and Rothen, A., rotatory dispersion of configuratively related aliphatic carbinols, A., II, 2.

Rothen, A., and Kuna, M., configurative relationship of alkyl halides with a-halogeno-acids, A., II, 316. Mechanism of the reaction of substitution and Walden inversion, A., II, 437. Rotatory dispersion of configuratively related amines, A., II, 447.

and Tipson, R. S., structure of acetone-d-xylulose, A., II, 483. Phosphorylation of isopropylideneadenosine and of diacetyladenosine, A., II, 524.

Tipson, R. S., and Kreider, L. C., reduction of the methyl ester of 2:3:4trimethyl a-methyl-d-galacturonide to 2:3:4-trimethyl a-methyl-d-galactoside, A., II, 484.

See also Bartlett, P. D., and Kuna, M.

Leventer, I. P. See Engl, J.
Leventry, R. L., and Republic Steel Corp., metallurgical furnace, (P.), B., 1224.

Lever Brothers Co. See Anderson, C. N. Leverenz, H. W., production of cathoderay tube screens, A., I, 428.

See also Marconi's Wireless Telegraph

Leverick, F., [copper-nickel] alloys, (P.), B., 250. Impregnating a metallic mass [iron or nickel] or metallic article with other metal [copper], (P.), B., 357. Levermore, C. L. See Gen. Chem. Co.

Leverton, R. M., ascorbic acid content of bananas at three stages during ripening, A., III, 233.

and Roberts, L. J., iron metabolism of normal young women during consecutive menstrual cycles, A., III, 262.

Levey, H. A., food-protecting material, (P.), B., 978. [Cellulose] filming and coating composition, (P.), B., 1242.
Levi, G. R., chlorites, A., I, 258.
Levi, L. E., fuels, (P.), B., 1305.

Levi, M., [light-weight] cement concrete, (P.), B., 349.

Levi, M. G., and Padovani, C., developments of hydrogenation at high pressures and the first Italian realisations, B., 414. Levi. P., modification of insulin action by

simultaneous administration of glucose, A., III, 322.

Levi, P. I., Orlov, V. I., and Krilova, M. N., distillation of the melt obtained in urea synthesis, B., 131. Levi, S. M., and Nedler, V. V., spectral

analysis of ores, B., 1063.

Levi, T. G., vulcanisation of rubber by diazoamino-compounds, B., 1245.

Levillain, A. See Bruhl, M. L. Levin, A. See Essin, O.

Levin, D. A. See Harris, I. Levin, H., micro-determination of viscosity of lubricating oils, B., 408.

and Uhrig, K., determination of carbon and hydrogen in gasoline and other volatile liquids, B., 1005.

See also Texas Co. Levin, I. A. See Zinoviev, V. S. Levin, M. I. See Ipatiev, V. V., jun.

Levina, C. A. See Pozin, M. E.

Levina, E. P. See Rabovski, G. V. Levina, R. J., catalytic isomerisation of diallyl and eugenol, A., II, 1. Contact isomerisation of methyl maleate, A., II, 273. Isomerisation of m-xylene and hexahydro-m-xylene during bromination, A., II, 283. Irreversible catalysis of dicyclic hydrocarbons; contact transformation of carane, A., II, 295. Synthesis of *m*- and *p*-allyl- and *p*-propenyl-toluene, A., II, 331. Analysis of eracking benzine, B., 750.

Juriev, J. K., and Loschkomoinikov, A. I., isomerisation of dicyclohexyl in presence of aluminium chloride, A., II, 236. Cracking of decahydroanthracene in presence of anhydrous alum-

inium chloride, A., II, 332.

and Petrov, D. A., catalytic isomerisation of unsaturated hydrocarbons with a double linking in the αβ-

position, A., II, 331.

Petrov, D. A., and Trachtenherg, D. M., mechanism of irreversible catalysis of unsaturated cyclic hydrocarbons with a double linking in the side-chain, A., II, 92.

and Potanova, A. A., catalytic transformation of cyclohexylacetylene, A.,

II, 236.

and Tscherniak, M. I., contact transformation of Δ^{γ} -butenylcyclohexane (8cyclohexyl-\(\alpha \)-butene), A., II, 236.

See also Juriev, J. K.

Levina, S., and Sarinski, V., hydrogen overvoltage at mercury and the ζ-potential. I., A., I, 521.

Levina, Z. I. See Okatov, A. P.

Levine, A. A. See Du Pont de Nemours & Co., E. I.

Levine, H., and Remington, R. E., vitamin- B_2 content of some foods, A., III, 495. See also Remington, R. E.

Levine, I. M., and Texas Pacific Coal & Oil Co., vapour-phase [hydrocarbon-] cracking apparatus, (P.), B., 19.

Levine, M., and Baumann, E. J., activo fraction of Rous chicken sarcoma, A., III, 418.

Galligan, W. E., Luebbers, R. H., and Iowa State Coll. Agric. & Mech. Arts, preformed media for biological oxidation, (P.), B., 1140.

Levine, M. See also Powers, M. J., and Vaughn, R.

Levine, P. P., effect of atmospheres of hydrogen, carbon dioxide, and oxygen, respectively, and of mixtures of these on growth of Bacillus subtilis, A., III,

Levine, S.A. See Schnitker, M.A.Levine, S. Z., McEachern, T. H., Wheatley, M. A., Marples, E., and Kelley, M. D., respiratory metabolism in infancy. XV. Daily energy requirements of normal infants, A., III, 126. See also Gordon, H.

Levine, V. E., precipitation and colour reaction for ascorbic acid; specificity of acidified sodium selenite solution, A., III, 155.

and McKay, F. M., differentiation of ergesterol from cholesterol, A., II, 16. See also Sachs, A.

Levinson, M. S., dynamics of carbohydrate metabolism in dogs and pigeons suffering from avitaminosis-B, A., III, 363.

Levisson, Z. F. See Sokolov, P. I.

Levit, R. Seo Slatineanu, A. Leviton, A. See Leighton, A.

Levitskaja, M., infra-red electron oscillations in the electric discharge, A., I, 2. New source of long-wave infra-red rays, A., I, 344.

Levitski, A.J., and Lesiukova, A.A., plant analyses as a means of determining fertiliser requirements on a production

basis, B., 595. Levitt, G., anti-diuretic substance in eclampsia and other hypertensive diseases: observations on spinal fluid, A., III, 419.

Levitt, J. Seo Scarth, G. W.

Levitzkaja, E. P., vapour pressure of ammonia, carbon dioxide, water, and formic acid over ammoniacal copper sulphate solution, A., I, 456.

Levkin, N. F. See Luknevitsch, I. F. Levkopulo, N. C. See Likushin, K. P.

Levschin, V. L., quantum interpretation of the mirror symmetry of absorption and luminescence spectra, A., I, 283. Absorption and luminescence spectra of uranyl salts and their solutions, A., I, 547.

and Vinokurov, L. A., decay of phosphorescence in boric acid and aluminium sulphate preparations, A., I,

Levtschenko, V. V. See Rodionov, V. M. Lévy, A. Sec Darzens, G., and Lapp, C. Levy, B. F. G., and Roach, W. A., injection

experiments on bitter-pit in apples, B., 824.

See also Hulme, A.C., and Roach, W.A.Levy, C. C., choosing conversion units for electrochemical plants, B., 254.

Levy, E. B. See Riddet, W. Levy, F. M., and Mueller Brass Co., flux [for soft soldering], (P.), B., 1047. Lévy, G. See Machebieuf, M. A.

Lévy, H. A., and Brockway, L. O., molecular structures of bromomethanes, A., I, 555.

Lévy, J. See Gautier, J. A., and Kahane, E. Levy, L., antiscorbutic value of S. African mangoes, B., 724.

Levy, L. A., and Davis, (Sir) R. H., oxygen-evolving compositions for use, e.g., in conditioning air for respiration, (P.), B., 543.

Levy, L. F., state of ascorbic acid in plant tissues, A., III, 78.

Levy, Max, and Mignon, S., determination of corpuscle-/plasma-ehloride ratio, A., III, 291.

See also Chabanier, H.

Lévy, Milton, and Silberman, D. E., reactions of amino- and imino-acids with formaldehyde, A., II, 280. Levy, M. M. R., and Audubert, R., emission

of a radiation by the eggs of Discoglossus during development, A., III, 132.

Levy, S. E., and Blalock, A., fractionation of the output of the heart and of the oxygen consumption of normal unanæsthetised dogs, A., III, 369. Levy-Bruhl, M., and Cado, Y. [with Huri],

general and biochemical characters of forty strains of mucous bacteria, A., III, 274.

See also Demanche, R. Lew, W. See Addis, T. Lewin, G. F. See Hume-Rothery, W.

Lewin, J. See Baudouin, A.

Lewinson, S., micro-determination of chloride in blood, A., III, 4.

Lewis, A., Lachish letters and the use of iron inks in antiquity, B., 589.

and Style, D. W. G., sensitive adaptation of the spoon gauge, A., I, 333.

Lewis, A. C., apparatus for boiling and heating liquids, (P.), B., 1148.

Lewis, B. See Elbe, G. von. Lewis, C. H. See Urbain, O. M.

Lewis, D., absorption of solutes by leaves,

A., III, 157.

Lewis, David, colorimetric determination of titanium in presence of bromine compounds, A., I, 150. Standardisation of eeric sulphate with potassium iodide by the acctone method, A., I, 477.

Lewis, E. P. See Lloyd, J. W. Lewis, F. J. See Bangham, D. H. Lewis, G. N., orbital neutrons, A., I, 6.

Neutron optics, A., I, 211.
and Macdonald, R. T., separation of lithium isotopes, A., I, 106.
and Schutz, P. W., refraction of neutrons,

A., I, 211.

Lewis, H. See Duke, F. Lewis, H. A. See Du Pont de Nemours & Co., E. I.

Lewis, H. B. See Brown, B. H., and White, F. R. Lewis, H. F. See Brauns, F. E. Lewis, I. M., cell inclusions and life cycle

of Azotobacter chroococcum, A., III, 146.

Lewis, J. B., and Baldeschwieler, E. L. determination of arsenic in mineral oil

solutions, A., I, 579.

Lewis, J. H., isoantigenic properties of casein, A., III, 5. Effect of deamination on antigenic properties of casein, A., III, 5. Theory of hapten action, A., III, 117. Antigenic properties of insulin, A., III,

Lewis, J. M., comparative antirachitic value of crystalline vitamin-D administered in milk, corn oil, or propylene glycol, A., III, 46.

Lewis, J. R., and Simonsen, J. L., constitution of sulphocamphylic acid, A., II, 200.

Lewis, L. See Dam, H., and Hartman, F. A.

Lewis, L. C., recent progress on colour problems in the paper industry, B., 126. Lewis, (Miss) M. N. See Dieke, G. H.

Lewis, M. R., photosensitivity of chick embryo cells growing in media containing certain carcinogenic substances, A., III, 460.

Lewis, R. C. Sec Stein, H. B.

Lewis, R. H., and Hillman, W. O'B., liquid asphaltic road materials, B., 107.

Lewis, Reginald H. See Dippy, J. F. J. Lewis, R. R., Weiss, A. J., and Vulcan Proofing Co., vulcanising rubber, (P.),

Lewis, W. B., Burcham, W. E., and Chang, W. Y., a-particles from radioactive disintegration of a light element, A., I, 108.

See also Burcham, W. E.

Lewis, W. C. M., electric charge at an oilwater interface, A., I, 300.

Lewis, W. H. See Bradley & Foster.

Lewis, W. K., and Squires, L., evaporation of mixed lacquer solvents, B., 261. Squires, L., and Nutting, R. D., rubber vulcanisation with sulphur, B., 1377.

Lewis-Dale, P., measurements by gas analysis of efficiency of the locomotive furnace, B., 105.

Lewkowitsch, P. R. E. See Grosjean, J. Lexaschova, T. P., drop method of detection of chromium, A., I, 478.

Ley, W., rocket propulsion, B., 845. Leydens, P. See Liempt, J. A. M. van.

Leyensetter, IV., influence of heat treatment on working properties of steels, B., 143.

Leyerzapf, H. W. See Brand, K.

Leyko, Z., milk and milk products at
Warsaw, B., 722.

Leyman, R. E., effect of cold-work and annealing on hardness of tin-antimony, tin-antimony-copper, and tin-antimonysilver alloys, B., 924.

Leysieffer, G., chemical aspects of phenol, cresol, and urea synthetic resins, B., 368. L'Herminier, A. See Internat. Combustion.

Li, H. C. See Yuan, H. C. Li, K. T., structure of a β -ray line by Absolute intensities of the strong β -ray lines of Ra (B+C), Th (B+C), and Ac (B+C), A. I, 275.

Li, L., and Pei, K., electrolytic preparation of magnesium persulphate, A., I, 254.

Li, L. Y., analyses of Szechuan coals, B.,

Li, N. J. J., dielectric constant and molecular size; rubber compounds. II. Duprene and rubber hydrochloride, A., I, 397.

Li, R. C. See Van Dyke, H. B. Li, S. Y. See Liu, S. K. Li, T. See Chipman, J.

Lialikov, J. S., measuring vessels, A., I, 267. Connexion between temporary resistance, elongation, and contraction of [metallic] rupture samples, B., 1067.

Lialiuschko, S. M. See Korenman, I. M. Liander, H., electrometric titration of carbonic acid and sodium hydrogen carbonate in dilute solution, A., I, 97.

Liang, C. K., detection of morphine in urine of opium-addicts, A., III, 121.

Liang, P., transformation of furfuraldehyde

by fermenting yeast, A., III, 70. Liang, T. Y., and Wu, S. W., pituitary humoral regulator of protein depots in the liver, A., III, 490.

Liaschtschenko, I.P. See Stepanov, D.V. Liashenko, A.I. See Bergman, A.G. Liaskovskaja, J.N. See Smorodincev, I.A.Libbey Glass Manufacturing Co., glass-

working apparatus, (P.), B., 1206. Libbey-Owens-Ford Glass Co. See Ryan, J. D., Scharf, J. J., and Watkins, G. B. Libbrecht, W., and Massart, L., effect of oxygen under pressure on succinic dehydrogenase, A., III, 138.

Libby, W. F., Lee, D. D., and Ruben, S., high-speed counter circuit of the Neher-Harper type, A., I, 152.

and Long, E. A., low-temperature neutrons, A., I, 593.

See also Rollefson, G. K., and Ruben, S. Libby, McNeill, & Libby, food product, (P.), B., 978.

See also Near, H. B.

Liben, I., energy distribution of photo-electrons emitted by calcium and calcium oxide, A., I, 273.

Liberato, S. N. See Papavassiliou, M.J.Liberman, A., new instrument for measuring consistency [of pastes and jellies],

Liberman, A. I., production of magnesite from dolomite in plant conditions, B., 904.

Liberman, I. P. See Schojchet, S. N. Liberman, L. J., and Bistrov, G. N., appliance for testing the creep of steel, B., 446.

Liberthson, L., and Sonneborn Sons, L., refining of petroleum oils, (P.), B., 1161. [Fruit-wrapping, etc.] paper, (P.), B., 1325.

Licas, A., blood-cholesterol during experimental hypercholesterolæmia in normal and splenectomised animals, A., III,

Lichatschev, M. See Karasik, V.

Licharscheva, A. I., thermal investigations of binary mixtures. III. Mixtures of p-nitroaniline with p-dibromobenzene. aniline, and dimethylaniline, A., I, 243. Chlorosulphonate chlorides. II. Tin and antimony chlorosulphonate chlorides, A., I, 372.

and Lutschinski, G. P., viscosity of chlorides of inorganic acids. V. Viscosity of vanadyl and chromyl chlorides, A., I, 405.

See also Lutschinski, G. P.

Lichoff, V., preparing an aluminium oxide layer by anodic oxidation, (P.), B., 1202.

Lichonin, A. V., adhesives for "rubberoid" roofing material for high and low temperatures, B., 1381.

Lichtenberg, H. See Körber, F. Lichtenberg, H. II. See Schwarz, Herman.

Lichtenberger, J., and Naftali, M., constitution and properties of dichloro- and dialkoxy-aldehydes, A., II, 368.

Lichtenberger, T., and Kaiser, L., watergas, (P.), B., 644.

Lichtenstein, N. See Fodor, A. Lichtman, A. L., fatty acids and glucose in the blood of deparcreatised dogs, A., III, 421.

Lichtman, S. S., blood clearance and renal excretion of bile acids following intravenous injection of cholie and deoxycholic acids, A., III, 259.

Lichtschein, J. See Groetzinger, G. Lichty, J. G. See Wingfoot Corp.

Lichty, L. C., and Phelps, C. W., carbon monoxide in engine exhaust, using alcohol blends, B., 868.

Liddel, U. See Wulf, O. R.

Lide, M. J., pulsating jig, (P.), B., 4. Lidkea, H. J., Spokes, R. E., and Amer. Brakeblok Corp., friction element composition, (P.), B., 997. Lidoyne, A. See Joessel, P. H.

Lidwell, O. M. See Bell, R. P.

Lieb, C. W. See Chapman, G. H.
Lieb, F., chromate-containing effluent
from chromium-plating works, B., 849. effluent

Lieb, H., and Soltys, A., quantitative organic micro-analysis. A., II, 222. See also Fawaz, G.

Liebe, C., action of crystallised follicular hormone on cloves and radishes, A., III,

Liebe, H., silver [soft] soaps, B., 1365. Lieben, F., and Bauminger, B., combination of sugars with amino-acids, A., II,

and Kretschmayer, R., degradation of amino-acids by animal tissues, A., III,

and Tandler, R. [with Weiss, P.], action of bromine on proteins, A., II, 436.

See also Bauminger, B., Benek, J., and Jesserer, H.

Lieber, E., and Smith, G. B. L., reduction of nitroguanidine. VII. Preparation of aminoguanidine by catalytic hydrogenation. IX. Reduction of nitrosoguanidine to aminoguanidine, A., II, 10, 489.

See also Fuller, L. P.

Lieber, M. M. See Moon, V. H. Lieberman, L., and Monk, G. S., alternating current arc source for the Zeeman effect, A., I, 536.

Liebesny, P., Wertheim, H., and Pollak, W., action of short and ultra-short Hertzian waves on fermentation organisms and enzymes, B., 76.

Liebetruth, E., chemotherapeutic action of homologues of apoquinine, A., III,

Liebhafsky, H. A., reactivity of zinc amalgams, A., I, 256. Rapid analysis of zinc-sodium amalgams, A., I, 327. and Winslow, E. H., diphenylthiocarbazone (dithizone) as an analytical reagent, A., I, 633.

Liebig, G. F., jun. See Chapman, H. D. Liebmann, A. J., improving and ageing distilled alcoholic beverages, (P.), B., 808

Liebmann, H., significance of protozoa in the self-purification of standing sewage effluent, B., 1281. See also Crowther, J. A.

Liebowitz, B., processing [double texture] fabrics, (P.), B., 228.

Liebscher, E., ferrosilicon, B., 1350.

Liebscher, J., tin glazes, B., 547. Liebscher, K. See Liebscher, W. Liebscher, W., and Liebscher, K., nutritive

value of soya-bean silage, B., 389.

Liechti, J. See Zetzsche, F. Lieck, H. See Lund, Helge.

Liedholm, C. A., retained austenite and its decomposition range in a quenched cobalt high-speed steel, B., 46. Liedl, E. See Gangl, J.

Liégeois, F., tyrosine index of the bloodpolypeptides in the normal dog, horse,

and pig, A., IlI, 111. and Térache, P., tyrosine index of the blood-polypeptides in cancerous dogs, A., III, III. Tyrosine index of the blood-polypeptides of dogs with

trauma, A., IlI, 112. Liehr, W. See N.V. Internat. Alfol Maats. Liem, H. T., temperature correction in

micro-m.p. determination, A., I, 200. Liempt, J. A. M. van, attack of molybdenum by alkaline potassium ferricyanide solutions, A., I, 42.

and De Vriend, J. A., light of combustion of metals, A., I, 195. Light from burning Al-Zn and Al-Cd alloys, A., I., 372.

Liempt, J. A. M. van, and Leydens, P., colour reproduction in photography with neon light, B., 500. and Uden, J. H. M. van, photographic

detection of thorium oxide in [tung-

sten lamp] filaments, B., 801. and Wijk, W. van, solubility of krypton in various liquids, A., I, 407. Rapid determination of inactive gases in nitrogen, A., I, 579. Rapid determination of inert gas content of nitrogen, B., 1335.

Lieneweg, F., determination of moisture in industrial gases containing dust, B., 737. [Measurement of] surface

temperature, B., 1283. and Dobenecker, O., determination of concentration of liquids by means of conductivity measuring apparatus, A.,

Lienhardt, H. F. See Cave, H. W. Liepatov, S. M., theory of lyophilic colloids,

A., I, 564. and Gorbatova, V. A., lyophilic colloids. X. Rotatory power and isoelectric point of gelatin fractions, A., I, 361. Sec also Abkin, G. L.

Liepus, T., silvering of glass, B., 546. Lier, C. van, and Uhlenbeck, G. statistical calculation of the density of

the energy levels of the nuclei, A., I, 440. Lier, J. N. See De Bruin, T. L. Llere, E. J. van, and Sleeth, C. K., absorption of sodium chloride from the small intestine at various degrees of anoxæmia, A., III, 263.

See also Sleeth, C. K. Lierg, F., coloured pictures, particularly in natural colours on paper, films, etc., (P.), B., 501.

Liesche, detection [and determination] of staple fibre in bandage materials, B., 1319.

Liesegang, R. E., structure catalyst, A., I,

Lieser, T., and Ebert, R., carbohydrates. VIII. Cellulose and its solutions. IX. Introduction of copper into polyhydric alcohols. X. Viscosity of solutions of cellulose, A., II, 179, 480, 487. and Schwind, V., lignin. I., A., II, 511. Lieshout, A. K. W. A. van. See Cohen, E. Lletz, J., coloration of zircon by irradiation,

A., I, 392. Lifschitz, E., electron gases in a magnetic field, A., I, 387.

See also Landau, L.

Lifschitz, I., disymmetrical synthesis in the case of complex metallic salts. II., A., II, 91.

and Froentjes, W., constitution, optical activity, and photochemical behaviour of platino-complexes. II. and III., A., Î, 285, 423.

Lifschitz, I. A. See Koblianski, G. G. Lifschitz, M. See Tschetverikov, N.

Ligas, Alfonso, toxin of Bacterium coli. I. II. Immunising power of the polysaccharide and curve of the agglutination titre. III. Action of antipolysaccharide serum on the polysaccharide and on living bacteria, A., III, 397, 454.

Ligas, Amerigo, cholesterol content of the adrenal cortex during experimental hypercholesterolæmia in normal and splenectomised animals, A., III, 476. Blood-sugar and -cholesterol of splenectomised and castrated animals treated respectively with testicular and splenic extracts, A., III, 491.

Light, A. B., and Warren, C. R., urea clearance and protein clearance during exercise, A., III, 259.

Light, A. E., effects of X-rays on frog skin, A., III, 388.

See also Cook, C. A.

Light, R. F. See Frey, C. N. Lightfoot, F. M. See Carver, J. S.

Lignoza Spolka Akcyjna, ignition mixtures for percussion caps, small munitions, and primers, (P.), B., 1280.

Ligorio, C., and Work, L. T., titanium dioxide; precipitation factors affecting

pigment properties, B., 589.

Ligtenberg, H. L., gold chloride reaction on mustard gas, B., 91. Comparative investigation of some mustard gas reactions, B., 396. Detection of war gases with coloured powders, B., 846.

Likhnitzky, I. I. See Leibson, R. G. Likushin, K. P., Masumjan, V. J., and Leykopulo, N. C., preparing synthetic acids by oxidising a wide fraction of Surachani fuel oil with air. II., B., 11.

Lilienfeld, A., Wright, I. S., and Mac-Lenathen, E., intramuscular injection of ascorbic acid and excretion in sweat, A., III, 104.

See also Wright, I. S.

Lilienfeld, J. E., anodes, method of forming same, and formation electrolyte therefore, (P.), B., 1363.

Chandler, L., jun., and Goldman, S., dielectric properties of anodic layers in aluminium electrolytic condensers, B., 802.

and Magnavox Co., forming electrodes for electrolytic condensers, (P.), B., 1074.

Lilienfeld, L., shaped structures from cellulose derivatives, (P.), B., Cellulose derivatives and artificial filaments, films, and other shaped structures therefrom, (P.), B., 333, 428, 1191. Cellulose derivatives, (P.), B., 1191. Lille, R. Sec Forestier, H.

Lilleengen, K., influence of freezing on vitamin-C content of orange juice and

milk, B., 180.
Lilleland, O., phosphate response with closely planted one-year-old fruit trees, B., 597.

Lillelund, H. See Veibel, S.
Lillie, R. D. See Smith, M. I.
Lillie, R. S. See Fetcher, E. S.. jun.

Lilly, J. H., selenium in dormant sprays, B., 712. Influence of certain factors on oviposition responses of the cherry casebearer, B., 713.

Lilly, R. M., rapid volumetric determination of lead in [oil-refinery] doctor solution, B., 870.

Lilly & Co., E. See Doubilet, H., Kharasch, M. S., and Powell, Horace M.

Lim, H., chemical studies of Rhizopus japonicus, A., III, 144.

Limaye, D. B., syntheses in the furocoumarin group. II. The karanjelin way of synthesising furocoumarins as illustrated on 5:4:7':8'-furocoumarin. IV. General considerations on the synthesis of the third type of furo-coumarin from resorcinol, A., II, 258.

and Gangal, D. D., syntheses of 2-acrylresorcinols by the Nidhone process. II. 2-Acetylresorcinol; proof of its constitution, A., II, 199. Syntheses in the furocoumarin group. III. Formation of the linear 3:4 dimethyl-4:5:6':7'-furocoumarin, A., II, 258.

Limaye, D. B., and Ghate, (Miss) I., reduction of 2-acylresorcinols. I. Reduction of 2-acetylresorcinol and its dimethyl ether, A., II, 250.

and Kelkar, G. R., syntheses in the 5-hydroxybenzopyrone group. II. 5-Hydroxy-2-methylchromone. Hydroxy-4-methylcoumarin, A., II,

254, 257,

and Sathe, N. R., synthesis of 6-hydroxy-7-acylcoumarones. I. 6-Hydroxy-7acetyl-3-methylcoumarone, A., II, 254. Effect of methylation on the course of hydrolysis of 8-acetyl-4-methylumbelliferone by caustic alkali; formation of stable cis- and trans-2-hydroxy-4 - methoxy-3-acetyl - β - methylcinnamic acids, A., II, 255.

See also Kelkar, G. R. Limber, C. R., and Gamble, J. T., histological stain from black walnut (Juglans nigra, L.), A., III, 288.

Limburg, H., wetting phenomena, A., I, 612.

Limburg, J. See Dorp, D. A. van. Limited Co., formerly Skoda Works, nov magnetic steel alloys, (P.), B., 932.

Lin, C. K. See Kronfeld, P. C. Lin, C. Y., and Wilson, E. O., decolorisation of Chinese vegetable oils with clays, B., 257.

See also Tang, P. S.

Lin, F. C., photodynamic action of methylene-blue on diphtheria toxin, A., III, 55. Kurotschkin, T. J., and Bernaradsky, C. V., preservation of viruses with saturated sodium chloride solution, A., III, 72.

Lin, I., automatic pipette, A., I, 536. Lin, K. H., Resuggan, J., Robinson, R., and Walker, James, synthesis of sub-stances related to the sterols. XVI. 4-Keto-7-m-methoxyphenylheptoic acid and some derivatives, A., II, 196.

Lin, P. See Rühl, A.
Lin, T. C. See Tseng, C. L.
Lin, W. H. See Mannich, C.
Linari, A., and Bonfiglio, G., electrolysis
of alkali chlorides; action of magnesium and calcium salts, A., I, 419.

Linck, G., formation of dolomite and dolomitisation, A., I, 482.

Lincoln, B. H., and Continental Oil Co., conversion of hydrogen sulphide into sulphur, (P.), B., 136.

Henriksen, A., and Continental Oil Co., penetrating oil, (P.), B., 875. See also Clark, G. L.

Lincoln Electric Co. See Jerabek, P. E. Lind, S. C., and Schiffett, C. H., oxidation

of α-ray cuprene, A., I, 194. Lindahl, P. E. See Heatley, N. G.

Lindberg, L. A., drawing furnaces, (P.), B., 356.

Linde, J. O., röntgenographic and electric investigations of copper-platinum systems, A., I, 559.

Linde, R., separation of low-boiling gas mixtures, (P.), B., 780. Refrigeration technique in relation to German political economy, B., 1142.

Linde Air Products Co., and Boshkoff, G.J., vaporising, storing, and dispensing gas material, (P.), B., 198.

and Bucknam, J. H., heating, welding, de-surfacing, or cutting, (P.), B., 1362. and Cowin, H. W., blowpipes, (P.), B., 301.

and Dana, L. I., transfer of liquefied gases, (P.), B., 1149.

Linde Air Products Co., Dana, L. I., and Hansen, O. A., storing and transporting

and De Motte, M. P., dispensing of gas material, (P.), B., 100.

and Gaines, J. M., jun., transfer of volatile liquids, (P.), B., 1149.

and Jacobson, W. J., blowpipes, (P.),

B., 301.

and Mesinger, W. F., transferring a liquefied gas from a region of relatively low pressure to a region of relatively high pressure, (P.), B., 1149. Moss, H. H., and Dawson, J. R., cutting

metals and conditioning the cut sur-

faces, (P.), B., 54. and Murphy, J. J., effecting transfer of volatile material from a region of low pressure to a region of higher pressure, (P.), B., 857.

See also Bliss, L. A.

Lindegren, C. C. See Vollrath, R. E. Lindeijer, E. W., explosion limits of hydrogen and chlorine with oxygen, carbon monoxide, and nitrous oxide, and of carbon monoxide and oxygen with chlorine and nitrogen, also of carbon monoxide with pitrous oxide, A., I, 190. Determination of explosion limits, A., I. 190.

Lindeke, H. F. See Shell Development Co. Lindem, M. C. See Cragg, R. W.

Lindemann, E., identification of mercerised cotton, B., 432.

Lindemann, F. A., research at the Iowest temperatures and its importance to industry, B., 987.

Lindemann, M., rapid determination of nitrogen with mercury-free selenium re-

action mixture, B., 718. Lindemuth, L. B., and Nitralloy Corp., nitriding [of steel, etc.], (P.), B., 931.

Linden, ter, flue-ash measurements, B.,

Linden, A. van der. Seo De Voogt, J. G. Linden, K. See Schneider, Walter.

Lindenberg, A., partition coefficient between neutral glycerides (or the corresponding fatty acids) and water of substances soluble in all proportions in the two solvents; tert.-butyl alcohol, A., I, 357. Micro-determination of tert.-butyl alcohol, A., II, 359.

See also Fontès, G. Linder, E. G., electron motion in a plasma,

A., I, 541.

Linderstrom-Lang, K., principle of the Cartesian diver applied to gasometric technique, A., I, 481. Dilatometric ultra-micro-determination of peptidase activity, A., III, 269.

and Engel, C., enzymic histochemistry. XXIII. Distribution of amylaso in outer layers of the barley grain, A., III. 482.

See also Hevesy, G. von, and Holter, H.Lindgren, D. L., respiration of insects in relation to heating and fumigation of grain, B., 73.

See also Shepard, H.H.

Lindgren, R. A., refractories for iron blast furnaces, B., 782.

Lindhard, J. See Bang, O. Lindholm, E. See Funke, G. W.

Lindhorst, W., and Semet-Solvay Eng. Corp., gas generator equipped with ashremoval means, (P.), B., 318.

Lindman, K. F., foundations of the theory of Lippmann's colour photography, A., I, 627.

Lindner, A. F., and Patschky, A., determination of skim-milk powder in meat products and sausages, B., 1125. Lindner, E. See Katz, L. N.

Lindner, I. See Caughlan, W. M.

Lindner, J., keeping properties of standard acids and alkalis; use of copper bottles, A., I, 260.

and Wirth, IV., volumetric determination of oxygen in organic compounds, A., II, 358.

Wirth, W., and Zaunbauer, B., aromatic phosphorus halides and their suitability for the volumetric determination of water, A., II, 220.

Lindner, K., colloid-chemical and detergent properties of hydratisable colloids in comparison with soap. I. Detergent action and hydratisable colloids. II. Emulsifying power of colloid solutions. III. Detergent power and surface activity of colloid solutions, B., 151, 256, 462.

Lindner, K. A., and Amer. Smelting & Refining Co., metallurgical furnace of the suspended-arch type, (P.), B., 52. Apparatus for separating metals and metal alloys [white metal from bronze or steel], (P.), B., 800. See also Betterton, J. O.

Lindner, R., and Kirk, P. L., quantitative drop analysis. VII. Determination of calcium. VIII. Determination of phos-

phorus, A., I, 530, 531. Lindner, W. See Neumann, Wilhelm. Lindquist, H. G. See Mueller, W. S.

Lindroos, E. See Sihvonen, V. Lindsay, G. A. See Field, J. ELindsay, J. D. See Copson, R. L.

Lindsay, L. M., Ross, A., and Wigglesworth, F. W., von Gierke's glycogen disease, A., III, 256.
Lindsay, T., apparatus for automatically

regulating the consistency of viscous fluids, (P.), B., 997.

See also Brit. Area Regulators.

Lindsay, W.D. See Gruhzit, O.M.Lindsley, M.F., jun. See Du Pont de

Nemours & Co., E. I. Lindstaedt, F. F., toxic spray compound, (P.), B., 1391.

and Turnbow, G. D., parasiticide, (P.), B., 498.

Lindstrand, F., iron perchlorates. I., A., I, 94.

Lindtrop, M. T., and Tolmatschev, J. M., spectral analysis of mineral waters, A.,

Lindwall, H. G. See Kwartler, C. E. Line, E. C., bacterial stains on sweated sheepskins, B., 374.

Line, W. R., and Aradine, P. W., determination of quartz in presence of silicates, A., I, 198.

Linegar, C. R., Dille, J. M., and Koppanyi, T., [pharmacology of] barbiturates. XVIII. Peripheral action of barbiturates, A., III, 25.

See also Koppanyi, T.

Linetzkaja, S. G. See Saposhnikova, N. V. Linevski, A. A., continuous determination of the sp. gr. of cyanide solution, A., I, 379.

Linford, H. B., electrolysis of aqueous solutions of sodium and zirconyl sulphates, A., I, 37. See also Fink, C. G.

Ling, A. W., and Muir, W. R., effect of poultry on chemical composition of herbage and soil, B., 377.

Ling, E. R., titration of milk and whey for determining colloidal calcium phosphate in milk, B., 179. Composition of milk and whey, B., 970.

Lingane, J.J., and Larson, W.D., standard electrode potential of silver, A., I,

See also Kolthoff, I. M.

Linge, K., intense cooling plants, B., Lingen, D. van, determination

transition probabilities in the copper spectrum and a study of the metal arc, A., I, 1.

Lingen, S. van der, rotating spark contact for comparative spectroscopy, A., I, 534.

Modification of the Jaeger surface
tension apparatus, A., I, 537. Universal gas-pressure apparatus, A., I, 537. Absorption spectra in the near infra-red

region of olive oils, B., 1079.

Linhart, T., diffusion in liquids. XI. Inter-diffusion of electrolyte solutions,

A., I, 295.

Link, G. K. K., rôle of heteroauxones in legume nodule formation, beneficial host effects of nodules, and soil fertility, A., III, 444.

and Wilcox, H. W., tumour production by hormones from Phytomonas tume-faciens, A., III, 444. Gall production in high- and low-carbohydrate tomato plants, B., 1103. Relation of nitrogencarbohydrate nutrition of Stayman apple trees to susceptibility to fire

blight, B., 1106. Link, K. P. See Campbell, H. A., Niemann, C., and Roberts, W. L.

Link-Belt Co., settling tanks for sewage, etc., (P.), B., 398. Production and heat treatment of a ferrous alloy, (P.), B., 1225.

See also Lauenstein, C. F., and Sayers,

Linke, F. W. See Beams, J. W.

Linke, R., and Rohrmann, W., dipole moments of phosphorus pentafluoride and boron trifluoride, and vapour pressure curve of phosphorus penta-fluoride, A., I, 284. Linkola, K. Sce Routala, O. Linn, C. B. See Egloff, G., and Upson,

F. W.

Linn, M. A. See Lovell, A. Linneboe, J. B., and Hastings, E. G., symbiotic function of Oidium lactis, A., III, 274.

Linneborn, H., purifier for wood-gas generating plant used on vehicles, (P.), B., 318.

Linnell, W. H., a small continuous still: the "minorstill," B., 196. See also Albert, A.

Linnett, J. W., and Thompson, H. W., force constants and structure, A., I, 224. Photochemistry of polyatomic molecules containing alkyl radicals. IV. Mercury dimethyl, A., I, 255. Force constants and molecular structure. IV. Ethylene and tetra-chloreethylene. VI. Compounds containing the cyanide link, A., I,

See also Thompson, H. W.

Linsbauer, calculation of enamel costs, B., 1205.

Linsert, O., and Winthrop Chem. Co., product of irradiation of vitamin-D, (P.), B., 188. Linsker, A. See Pauli, W.

Linstead, R. P., Millidge, A. F., Thomas, S. L. S., and Walpole, A. L., dohydrogenation. I. Catalytic dehydrogenation of hydronaphthalenes with and without an angular methyl group, A., II, 406.

Millidge, A. F., and Walpole, A. L., fused carbon rings. XIII. Synthesis of derivatives of decahydronaphthalene containing an angular methyl group, A., II, 412.

and Noble, E. G., phthalocyanines. XII. Experiments on the preparation of

tetrabenzporphyrins, A., II, 352.

Noble, E. G., and Wright, J. M., phthalocyanines. IX. Derivatives of thiophen, thionaphthen, pyridine, and pyrazine :: nomenclature, A., II, 352.

and Robertson, J. M., stereochemistry of metallic phthalocyanines, A., II,

and Wang, A. B.-L., coupling of diazonium salts with derivatives of cyclic β-ketonic acids, A., II, 339.

Wang, A. B.-L., Williams, J. H., and Errington, K. D., fused carbon rings. XII. A simple synthesis of derivatives of decahydronaphthalene from cyclohexanone, and observations on cyclohexanespirobutyrolaetone and allied

compounds, A., II, 412.
See also Barrett, P. A., Bilton, J. A.,
Bradbrook, E. F., Cook, A. H.,
Imperial Chem. Industries., Kon, G. A. R., and Newitt, D. M.

Lintner, John, results of a fertiliser experiment on sugar cane, B., 73.

Lintner, Josef. See Spath, E. Linton, E. C. See Fairley, A.

Linton, E. P. See Cooper, D. Le B.

Linton, R. G., composition of mare's milk, B., 970.

Linton, R. W., and Mitra, B. N., vibrio polysaccharides, A., III, 488.

Mitra, B. N., and Mullick, D. N., respiration and glycolysis of the cholera and cholera-like vibrios, A., III, 318.

Mitra, B. N., and Seal, S. C., agglutination in the vibrios. I. Effect of heat on chemical structure and surface potential. II. Effect of salt and sera, A., III, 488.

Linzell, H. K., and United States Gypsum Co., mastic floor topping, (P.), B., 142. Liotta, S., and La Mer, V. K., hydrogen-

deuterium exchange in acetate solution, A., I, 362.

See also Greenspan, J.

Lipkaschevitsch-Duvanova, J. T., and Ivanov, B. V., application of the polarising microscope to study of non-metallic inclusions in steel, B., 351.

Lipkin, D. See Marks, E. M.

Lipkina, E., physico-chemical properties of the phenol-furfuraldehyde synthetic tannin from peat tar, B., 703. See also Osipenko, F.

Lipmann, F., hydrogenation of vitamin- B_1 , A., III, 103. Pyruvic acid dehydrogenation, vitamin- B_1 , and cocarboxylase, A., III, 354. Dehydrogenation of pyruvic acid, A., III, 427. Lipp, J. W. See Metzger, F. W.

Lipp, M., and Steinbrink, H., stability and capability of transformation of the pinane system in tertiary methylnopinol and in homologous tertiary nopinols, A., II, 426.

Lippert, (Frl.). See Knorr, M.

Lippert, A. See Fnson, R. C.

Lippert, W., null method of estimating the half-life periods of metastable atomic states A., I, 539.

Lippmann, E_{\cdot} , and Dacha, U_{\cdot} , nitrogen : sulphur ratio of the whole organism of rats fed with cystine, A., III,

and Sangnineti, T., effect of vitamin-Con the action of insulin in the organism, A., III, 496.

Lippmann, L., device for denicotining tobacco, (P.), B., 1409.

Lippmann, R., and Wajzer, J., modification of the ratio between anaërobic glycogenolysis and formation of lactic acid, A., III, I30. Ionic reaction and anaërobic metabolism of isolated muscle, A., III, 385. See also Wajzer, J.

Lippross, O. See Labes, R. Lips, E. M. H. See Brandsma, W. F. Lipschitz, L. L., dehydration of gypsum suspensions, B., 1335.

Lipschitz, W., and Büding, E., d- and lborncolglueosides, A., II, 400.

Lipska, I., colon organisms and bacteriophages in milk, B., 489. Alkali-producing bacteria of the coli-aerogenes group in milk, B., 721. pson, H.,

on, H., crystal structure of 3CdSO₄,SH₂O, A., I, 17. Lipson,

See also Bradley, A. J., Bragg, W. L., and Jones, F. W. Liquid Carbonic Corporation. See Hunt,

F. B. Lirmann, J. V., and Schdanov, H. S., crystal structure of gallium nitride, A., I, 288.

Lirtzman, R. See Kulberg, L. Lischer, C. F., and Jordan, C. N., homologues of thioprocaine, A., II, 456.

Lischka, E. See Jantsch, G. Lisenko, A. M. See Korenman, I. M.

Lisicová, S. See Bureš, E. Lisitzki, N. N., rapid filtration of silicic

acid, A., I, 268.

Liskovitsch, N. A., consumption of sulphuric acid in parchmentisation of paper, B.,

Lison, L., resorptive permeability of the toad's ureter towards several diffusible acid dyes studied by intraglomerular micro-injection, A., III, 476.

Lissaman, A. E., bituminous macadam surfaces for roads, etc., (P.), B., 41. Lisse, M. W. See Pedlow, J. T.

Lissitzin, D. I., rôle of maltase in hydrolysis of starch by different varieties of malt, A., III, 141.

Lissitzin, M., chemical nature of acid groups of proteins. A. III, 374.

and Diatschenko, P., titration curves of amino-acid mixtures, A., III, 374.

Lissman, M.A., and Internat. Precipitation Co., electrical precipitation apparatus, (P.), B., 695. Separation of suspended particles from gases, (P.), B., 742.

Lissner, A., and Brandeis, H., decomposition of sulphur compounds in coal. II. Determination of pyritic sulphur by means of hydrogen peroxide, B., 404. List, H., wood [suction-]gas engine, B., 746.

Lister, A., and Hodsman, H. J., carbonisation product of bakelite, B., 466. Lister, D. A. See Hercules Powder Co. Lister, M. W. See Hammiek, D. L.

Litkenhons, E. E., and Mann, C. A. hydrogenation of nickel carbonyl, A.,

Litkevitsch, S. A. Sco Amitin, B. Z. Litovischenko, D. M. Sco Bezugli, D. V. Little, A. H. Sco Clibbens, D. A. Little, J. M. Sce Haldi, J.

Little, L. L., determining the alkaline constituents of washing powders and solutions, B., 585.

Little, W. T., and Amer. Zirconium Corp., titanium dioxide, (P.), B., 668.
Little, Inc., A. D. See Billings, H. J.,
Buron, H. A., Crocker, E. C., Harford,

C. G., and MacDonough, J. V.

Littleford, J. W., concentrating operations at the Roan Antelope copper mines, B.,

Littler, H. G., kinetics of countercurrent absorption towers, B., 197.

Littmann, E. See Hilpert, R. S.

Littmann, E. R., terpene-maleic anhydride resins, B., 61.

Litvakovski, A. A., application of highly refractory sillimanite materials in the glass industry, B., 544. Litvinova, L. M. See Sokolova, E. A.

Lityński, A., effect of seed disinfectants on development of root nodules in tho

kidney bean, B., 1252. Litynski, T., determination of nucleic phosphorus in horse-beans (Vicia faba minor), A., III, 107.

Litzka, G., biological activity of an aminoacid with fluorine in the nucleus (fluorotyrosine), A., III, 22. Antithyrotoxic action of fluorotyrosine, A., III, 22.

Litzow, K. [with Jacschke, B., and Friedrich, I.], simple unsintered lead glazes [for ceramics], B., 439.

Liu, C. See Sun, C. E., and Tseng, C. L. Liu, C. C. See Chang, Ta Y.

Liu, C. L. See Fang, H. Y. Liu, F. Y. See Chow, R., and Hohorst, G. Liu, S. C., Chow, B. F., and Lee, K., effect of immunisation on distribution of serum-proteins, A., III, 117.

Chow, B. F., and Wu, H., isolation of a basic fraction from normal and immune horse sera, A., III, 117.

and Wu, H., effect of removal of lipins in the precipitability of serumeuglobulin, A., III, 164. Effect of removal of lipins on the solubility of serum-proteins in potassium phosphate solution, A., III, 164.

Liu, S. H., Su, C. C., Wang, C. W., and Chang, K. P., calcium and phosphorus VI. Lactmetabolism in osteomalacia. ation and beneficial action of vitamin-D.

A., III, 175. Liu, S. K., Ma, C., and Li, S. Y., alkaloid from Chinese hanfangchi, A., II, 219. Ma, C., Li, S. Y., and Lo, C. F., alkaloid from Japanese hanfangchi, A., II, 219.

Liu, T. F. See Sah, P. P. T.Liu, T. K. See Woo, S. C.

Liu, W. T., and Speakman, J. B., ageing of wool fabrics, B., 1040.

Liu, Y. P., and Chou, T. P., modification of Rast's micro-method for mol. wt.

determination, A., I, 100. and Wang, T. M., new monoazo-dyes. I. 3-Supho-p-toluidine-5-(1-azonaphthalene-4-sulphonic acid), B., 1025.

and Wei, T. C., distribution experiments on trimethylethylene and methylethylethylene between carbon tetrachloride and aqueous phase, A., I, 357.

Liubimova, M. N., oxidative resynthesis of adenosine triphosphate in leucocytes, A., III. 193.

Liubomirskaja, N. V. See Gerke, F. K.

Liubomudrov, V. F., and Tzukerman, S. V., condensation of aminomethylisopropylcarbinol(a-amino-y-methylisobutyl alcohol) with benzaldehyde, cyclohexanone, and hydrocyanic acid, by Strecker's method, A., II, 192. cyclohex-

Liubtschenko, L. D. See Hamner, P. A. Lindkovskaja, M. A. See Avdeeva, A. V. Liverovski, J., soils of the extreme north

[U.S.S.R.], B., 1095.
Livingood, J. J., Fairbrother, F., and
Seaborg, G. T., radioactive isotopes of manganese, iron, and cobalt, A., I, 490.

and Seaborg, G. T., radioactive isotopes of antimony, A., I, 490.

See also Kurie, F. N. D.Livingston, B. E., and Norem, W. L., water-supplying power and water-absorbing power of soils as related to wilting of wheat and Coleus in greenhouse pot cultures, B., 598.

See also Grossenbacher, K. A.

Livingston, M. S., Genevese, F., and Konopinski, E. J., excitation of characteristic X-rays by protons, A., I, 386.

See also Hoffman, J. G.

Livingston, N. See Roberts, R. H.

Livingston, R., approximate correction of b.p. for variation in barometric pressure, A., I, 71.

See also Nurnberger, C. E.

Livingstone, A., and Loudon, J. D., action of sulphinates on 1:5-dichloro-2:4-

dinitrobenzene, A., II, 140. Livingstone, E. M. See Reed, W. D. Livovschi, V., 5:7-dimethyloxindole, A., III, 115.

Livschitz, A. M. See Serb-Serbin, P. V. Livschitz, R. S. See Berkenheim, A. M. Livschitz, S. See Moldavski, B. L. Livschitz, V. D. See Kamzolkin, V. P. Livsey, H., tubular feed-water heaters and

similar heat exchangers, (P.), B., 991.

Lialikov, K. S., experimental verification of Thomson's formula, A., I, 453.

Ljamin, N. F., steam-kerosene treatment of sulphur ores, B., 133. Increasing percentage extraction of sulphur by the autoclave method, B., 133. Rational technological conditions for the melting out of sulphur by the autoclave method, B., 905. Influence of kerosene on coalescence of sulphur, in the autoclave method, B., 905.

Ljasko, B. A., and Schtepan, G. V., influence of evaporation under pressure on yield of molasses, B., 380.

Ljung, H. A., qualitative test for selenium. I., A., I, 475.

Ljunggren, S. See Hägglund, E. Llewellyn, F. J., Cox, E. G., and Goodwin, T. H., crystalline structure of the sugars. IV. Pentaerythritol and the hydroxyl bond, A., I, 448.

Llewellyn, F. T. See Bain, E. C. Lloyd, A. H. See Herbert, Ltd., A.

Lloyd, (Miss) B., bacteria in stored seawater, B., 505.

Lloyd, B. A., Thompson, S. O., and Ferguson, J. B., equilibria in liquid systems containing furfuraldehyde, A., I, 307.

Lloyd, (Miss) D. J., assessment of quality in any given sample of vegetabletanned sole leather, B., 1247.

and Merry, E. W., quality of vegetable-tanned sole leather. IV. Relation be-tween quality and composition, B., 476, 817.

Lloyd, (Miss) D. J., and White, Philip, processing New Zealand [dewooled

sheep] pelts, B., 816.
Lloyd, E. I., preventing failure of boiler fusible plugs, B., 737. Heat insulation, B., 1284.

Lloyd, J. W., and Lewis, E. P., substitution of commercial fertilisers for manure in vegetable production, B., 166.

Lloyd, P., gas heating in the food industry, B., 78.

Lloyd, R. L., Hyde, R. W., and Dwight & Lloyd Metallurg. Co., basic refractory material, (P.), B., 39.
Lloyd-Evans, B. J. See Watts, S. S.

Lo, C. F. See Liu, S. K. Lo, C. P. See Yang, P. S. Lo, T. S., and Ts'ai, L. S., mechanism of pyrogenic decomposition of cottonseed oil, B., 806.

Lob, G., form of highly polymerised molecules in solution, A., I, 28.

Lobanov, E. V. See Tschirkov, S. K.

Lobaugh, F. E., colours for sand-moulded brick, B., 1051.

Lobeck, H. See Erlenmeyer, H.

Lobley, A. G. See Birmingham Electric Furnaces.

Lobry de Bruyn, C. A., examination of motor fuels, B., 407.

Lobunetz, M. M., determination of dinitrobenzene, A., II, 268. Analysis of nitrosalicylic acid, A., II, 268. See also Perrier, M. I.

Localio, S. A. See Dobriner, K.
Locatelli, A. See De Caro, L.
Locati, L. See Prever, V.
Locher, G. L., Wilson cloud machines for portable use, A., I, 100.

and Haines, C. L., magnetic spectrum of positrons generated in lead by thorium-C" y-rays, A., I, 488. Magnetic spectrum of positrons generated in silver and lead by y-rays from radium-C, A., I, 542

See also Nagai, M., and Swann, W. F. G. Lochhead, A. G., nitrate reduction test and its significance in the detection of Bacillus larvæ, A., III, 224.

and Farrell, L., effect of preservatives on fermentation and viability of sugartolerant yeasts, B., 718.

See also Taylor, C. B.

Lochte-Holtgreven, IV., influence of pressure on predissociation, A., I, 1.

and Maecker, H., temperature measurement on freely burning carbon arcs by means of the CN band, A., I. 278.

Lock, G., derivatives of pyrene, A., II, 285. and Bayer, E., reduction of aromatic nitro-compounds with sodium stannite, A., II, 56.

and Böck, E., fission of ketones with alkalis. I. Chloroacetophenones, A., II, 293.

Lock, R. H. See Howards & Sons.

Locke, A., Locke, R. B., Bragdon, R. J., and Mellon, R. R., fitness, sulphanilamide, and pneumococcus infection in the rabbit, A., III, 462.

Locke, R. B. See Locke, A.

Locke Insulator Corporation. See Gouverneur, M. F. H.

Lockemann, G., and Ulrich, W., toxicity of thiocyanates to bacteria. III. Effect of acid and alkaline solutions of thiocyanates on tubercle bacilli and on tuberculous sputum, A., III, 435.

Lockenvitz, A. E., self-fractionating oil-diffusion pump, B., 1283.

Locker, G., and Atlas Ago Chem. Fabr. A.-G., impregnated and coated textiles,

(P.), B., 664. Lockey, J. See Distillers Co.

Lockhart, (Miss) D., and Turner, E. E., aryloxy-derivatives of pyrimidines, quinoxalines, and quinolines, A., II, 213.

Lockridge, E. R., and Meyer, L. W., drying and mixing mechanism, (P.), B., 2.

Lockspeiser, B., prevention of ice accretion [on aircraft], B., 508.

Lockwood, H. C., welding and welded joints, (P.), B., 1229.
Lockwood, J. E., Swan, D. R., and Hart-

man, F. A., relation of the adrenal cortex to vitamin-C, A., III, 282.

Lockwood, J. F. See Simon, Ltd., H. Lockwood, L. B., Ward, G. E., and May, O. E., physiology of Rhizopus oryzæ, A., III, 144.

Locomotive Finished Material Co. See Muchnic, H. E.

Locsin, A. M., nitrogen partition in three native varieties of pigeon peas (Cajanus cajan [L.], Millsp.), A., III, 287.

Locuty, P. See Laffitte, P.

Loddengaard, P. M., Sveen method for increasing the retention of fillers and fibres [in paper], B., 1188.

Lode, A. See Wanag, G. Lodeesen, H. J. See Tanner, R. R. Lodenkämpfer, H., adsorptive action o

colloidal aluminium hydroxide, A., III,

Loder, D. J. Sec Du Pont de Nemours & ${\bf Co.,}\ E.\ I.$

Lodge, F. See Imperial Chem. Industries. Lodge, L. See Lodge-Cottrell, Ltd.

Lodge, W. C. See Campbell, W. B.

Lodge-Cottrell, Ltd., and Lodge, L., electrical separation of suspended particles from gaseous fluids, (P.), B., 1364.

Loeb, H. D. See Texas Co. Loeb, L., biological basis of individuality, A., III, 335.

See also Hayward, S. J.

Loeb, L. B., mechanism of the static spark discharge, A., I, 105. Energy of formation of negative ions in oxygen, A., I, 160. Recombination of ions over an extended pressure range, A., I, 437. Ionic recombination in the ionosphere, A., I, 488, 491.

Loeb, R. F. See Stahl, J.

Loebenstein, H., heat rigor of avian muscle, A., III, 173.

Löbering, J., kinetics of polymeric aldehydes. III. Physical influences on the rate of solution of polyoxymethylenes. IV. Mechanism of the process of solution of polyoxymethylenes. VI. Formation and decomposition of polyoxymethylene, A., II, 228, 274, 399. Influence of Röntgen rays on van der Waals forces, A., III, 416.

and Fleischmann, A., mono- and dihydroxymethylene dimethyl ether, A., II, 396. Kinetics of polymeric aldehydes. VII. Velocity of hydrolysis

of formaldehyde acetals, A., II, 399. and Jung, K. P., kinetics of polymeric aldehydes. V. Formation of polyoxymethylene dihydrates having a single chain length and their characterisation by their solution velocity constants, A., I, 468.

Löbl, K., and Ksir, K., evaporators, (P.), B., 634.

Löcker, H. O. See Bokhaven, W. C. Löffler, H., determination of ignitability of oil vapour-gas-air mixtures lying above mineral oil, B., 517. Determination of calorific value of fuels difficult either to ignite or to burn completely in the calorimeter bomb, B., 1292.

Löfgren, N. See Erdtman, H. Löfquist, K. H. S., aluminium oxide, (P.) B., 779. Separation of aluminium oxido from raw material, (P.), B., 1047.

Löhr, H., and Wilmanns, H., micro-determination of iodine in biological material, A., III, 288.

See also Brückner, H.

Loele, W., influence of amino-acids on nutrient media and bacteria, A., III, 37. Lönnberg, E., carotenoid pigments in the eyes and "liver" organs of invertebrates, A., III, 200. Carotenoid pigments in organs of fishes; carotenoid substances in cephalopods, A., III, 296.

Loepelmann, F., determination of the thickness of cloxal films, B., 1223.

Loeper, M., Cottet, J., and Escallier, G., variations in glutathione and ascorbic acid in [guinea-pig's] liver, A., III, 326. Lörinczi, K_{\cdot} , g factors of rare gas terms, A_{\cdot} , I, 589.

Loesche, A., "dwarf pine oil" (oil of Pinus pumilio), B., 87.

Lösche, H. See Eisenwerke Weserhütte A.-G.

Loeser, A., and Trikojus, V. M., influence of pituitary thyrotropic hormone on the vitamin-C content of the adrenals and liver of guinea-pigs, A., III, 360.

Loetscher, E. C., fireproof building material, (P.), B., 577.
Loevski, M. L. See Piankov, V. A.

Löw, E. See Müller, W. J.

Loew, L., chemo-physiological activity of potassium and the protoplasm apparatus, A., III, 133.

Loewe, L. See Arndt, F. Loewe, S., highly emissive cathodes, (P.), B., 362.

Loewe, W. See Pfeiffer, P.

Löweneck, M. See Demeter, K. J. Loewenthal, B., and Federal Tobacco Corp., treatment of tobacco, (P.), B., 88.

Loewenthal, H., and Pradham, M. G. hæmolysin from a strain of animal streptococci, A., III, 147.

Loewi, O., water-insoluble form of acetylcholine in the central nervous system, A., III, 374. Strychnine excitation and acetylcholine content of the central nervous system, A., III, 391. Lofquist, A. F. T. See Anderson, N. G.

Loft, H., applicability of "mass weight" determinations to evaluation of rye and wheat, B., 487.

Loftns, T., handling heavy tar emulsion, B., 863.

Logan, A. V. See Davis, T. L.

Logan, J. O., and Mathieson Alkali Works, utilisation of chlorine dioxide, (P.), B.,

Logan, K. H., soil-corrosion studies, 1934; rates of loss of weight and penetration of non-ferrous materials, B., 268. Underground corrosion [of ferrous materials], B., 792.

and Ewing, S. P., soil-corrosion studies, 1934; field tests of non-bituminous coatings for underground use, B., 566.

Logan, L. See Huff, W. J. Logan, M. A., determination of magnesium by alkalimetric titration, A., I, 46.

Logan, M. M., and Taylor, H. L., solubility

of bone salt, A., I, 412. Logan, W. B., Knapp, I. E., and Newport Industries, treatment of low-grade resin, (P.), B., 469.

Seè also Texas Co.

Logemann, W. See Kathol, J.

Loginov, N. E., Korolkov, S. I., and Miropolski, V. I., treatment of frozen sugar beet, B., 379.

Logue, L. H., froth-flotation apparatus, (P.), B., 401.

Logvinova, Z. V., effect of organic and inorganic fertilisers prepared from peat, B., 820.

Lohaus, H., and Steiner, M., identification of isomeric piperic acids by microchemical methods, A., II, 314.

Lohmann, F., surface treatment of magnesium and magnesium alloys, B.,

Lohmann, G., improvement of [coal-]slurry clarification, B., 199.

Lohmann, H., and Säuerländer, E., fluid quantity meter, B., 736.

Lohmann, Heinrich, and Braun, acetate staple-fibre. I .- III., B., 655, 892, 1033.

Lohmann, K., chemical processes during contraction of muscle, A., III, 90. and Schuster, P., co-carboxylase, A., III,

97.

Lohmar, W. See Peters, K. Lohr, H. See Mohler, H.

Lohr, J. M., electrical resistance alloys, (P.), B., 1226.

and Driver-Harris Co., [nickel-chromiumiron] alloys, (P.). B., 1225. Lohrmann, O. See Fricke, R.

Lohwag, K., preservation of [specimens of] the most usual wood reactions, A., III, 288. Permanent specimens of the main wood reactions, B., 1209. See also Kisser, J.

Loicjanskaja, M. S., first stages of decomposition of cellulose by Spirochata

cytophaga, A., III, 273.

Loiseleur, J., reciprocal relation between glycemia and chloremia, A., III, 4. Variation in blood-sugar with blood-nitrogen, A., III, 53. Modifications in the hyperglycemia induced during histolysis, A., III, 93. Adsorption of polypeptides by proteins; behaviour of peptone in solution, A., III, 374.

[with Colliard, R., and Crovisier, C.], demonstration of a masked form of nitrogen specific to conditions of histolysis, A., III, 371.

and Colliard, R., adsorption of polypep-

tides by blood-plasma proteins, A.,

and Crovisier, C., existence of products of histolysis caused by absorption of tissues damaged by X-rays in rabbits, A., III, 388.

and Nyka, W., variation in hyper-glycamia during the proliferation of a grafted tumour, A., III, 171.

Loisy, P. See Lenlier, A. Lojkin, M., inactivation of tobacco virus by ascorbic acid, A., III, 100. Ascorbic acid as an inactivating agent of tobacco mosaic virus, A., III, 435.

Loleit, H. See Paneth, F. A. Lolli, G., action of insulin on gastric secretion in normal and diabetic men, A., III, 278. Blood-alcohol curve following gastric and duodenal administration of alcoholic beverages, A., III, 336.

Lom. A. von, and Büttner-Werke A.-G., drying plants, (P.), B., 509.

Lomakin, B. A., thin films of synthetic rubber, B., 591.

Lombard, B. V., differentiation and relationship of rocks of the Bushveld complex, A., I, 52.

Lombard, R. H. See Merwin, H. E.

Lombard, V., Eichner, C., and Albert, M., permeability of palladium to hydrogen. VII. Influence of the state of purity of palladium on the changes produced in diffusive power by heating above 500°; further consideration of the effect of temperature, A., I, 458.

Lombert, M., dispersion in other vapour,

A., I, 115.

Lombroso, C., phloridzin diabetes and the endocrine system. I. Thyroidectomy. II. Thyroidectomy and administration of cortical hormone, A., III, 403. See also Cera, B.

Lombroso, U., Bellini, L., and Filippon, S., intestinal absorption of triolein in absence of bile or pancreatic juice, A., III, 468.

Lominski, I., characteristics of the lysin precipitable by alcohol in bacteriophagic lysates, A., III, 227. Has alexin a corpuscular nature? A., III, 251.

Lompe, A. See Alterthum, H.

Lompe, L., refractometric determination of oil in linseeds by the Leithe method, B., 938. Effect of mineral manuring on mineral matter and pectin contents of flax, B., 1387.

London, E. S., and Alexandry, A. K., participation of ornithine, citrulline, and arginine in the normal process of urea formation in the liver, using angiostomy. II., A., III, 174. Krebs' theory of urea production, A., III, 211.

and Kotschney, $N_{\cdot \cdot}$, distribution of various enzymes in intermediate regions of animals with certain blood-vessels and organs excluded by anastomosis. I. Amylase, A., III, 482.

London, F., theory of molecular forces, A., I, 116. Superconducting state, A., I, 292. Quantum theory of diamagnetism of aromatic compounds, A., I, 504. Superconductivity in aromatic compounds, A., I, 606.

London Brick Co., Ltd., and Wiggle, F. J., sand-faced bricks, building slabs, etc.,

(P.), B., 577.

Lonergan, G. P., automatic process in powdered milk manufacture, B., 80. Lones, G. W. See Lauer, W. M.

Long, C. N. H. See White, Abraham. Long, C. P. See Smither, F. W. Long, E. A. See Libby, W. F.

Long, E. R. See Nelson, W. E.

Long, F. A., and Olson, A. R., rate of exchange between chloride ion and chlorine in aqueous solution, A., I, 35. Reaction between bromosuccinate ion and thiosulphate ion, A., I, 249.

See also Dinsdale, A., and Olson, A. R.

Long, H. F. See Frazier, W. C. Long, J. H., seasonal changes in nitrogen and carbohydrate content of strawberry plant, B., 601.

and Murneek, A. E., nitrogen and carbohydrate contents of the strawberry plant; seasonal changes and effects of fertilisers, B., 1253.

Long, J. S., Ball, G. L., jun., and Archer-Daniels-Midland Co., resinous products from chlorinated oxidised fatty oils, (P.), B., 1242.

Long, J. S., and Lehigh Univ., resinous products from chlorinated oxidised fatty

oils, (P.), B., 1242. Long, L., jun. See Fieser, L. F. Long, M. L. See Bischoff, F.

Long, T. P., and Kersten, H., stimulation of growth of soya-bean seeds by soft X-rays, A., III, 105.

Long, W. L., heating and drying apparatus, (P.), B., 991.

Longchambon, H., palygorskites, A., I, 156. Dehydration curves of minerals, A., I,

Longchambon, L., pyrogenation of carbon, B., 745. Dehydration of coal, B., 998.

Longenecker, H. E., fractionation equipment for qualitative and quantitative examination of natural fats, B., 938.

See also Hilditch, T. P.

Longfield-Smith, L., determination of juiciness in grapefruit, B., 182. Relative amounts of arsenic found on the surface and in tissues of celery plants sprayed with lead arsenate and other arsenical poisons, B., 481. Enforcement of the arsenical spray law; report of the chemist, B., 481. Effects of arsenical sprays on grapefruit, oranges, tangerines, Temple oranges, limes, and lemons, B., 825. Effects of spray applications of "triple phosphate of lime" to grapefruit and orange trees, B., 825. Acidity [of citrus fruits] as determined by titration and $p_{\rm R}$, B., 836.

Longinescu, G. G., and Prundeanu, I. I., complete gravimetric analysis by precipitation directly in Jena glass filter

crucibles, A., I, 153.

Longinov, V., and Dzirkal, V., removal of alcohol from ethyl acetate. III., B., 415. Longmore, E. L., and Hollinger Mill Staff, low versus high discharge for ball mills, B., 508, 852.

Longo, B., diphenyl series, A., II, 187. Longo, G., dioximes. CXX., A., II, 155. Longsworth, L. G., densities of mixtures of

light and heavy water, A., I, 507. and MacInnes, D. A., bacterial growth at constant $p_{\rm H}$; physiology of Lactobacillus a idophilus, A., III, 225, 274. Transference numbers and ion mobilities of electrolytes in deuterium oxide and its mixtures with water, A., I, 566. See also MacInnes, D.A.

Longwell, B. B., Johnston, R. P., and Hill, R. M., activity of yeast extract in prevention of renal hypertrophy caused by high-protein diets, A., III, 209. and Ravin, A., effect of intravenous

administration of protamine-insulin, A., III, 279.

See also Draper, W. B.

Longyear, R. D., recovering and interpreting diamond core drill samples, B., 793. Lonsdale, (Mrs.) K., magnetic anisotropy

and electronic structure of aromatic molecules, A., I, 397.

and Krishnan, K. S., diamagnetic anisotropy of crystals in relation to their molecular structure, A., I, 18. See also Clews, C.J.B.

Lonskaja, M. P., physico-chemical characterisation of thermoanthracite, B., 311. Determination of volatile substances in anthracites, B., 744.

Lonza Elektrizitätswerke & Chemische Fabrik Akt.-Ges., and Lonza-Werke Elektrochem. Fabr. G.m.b.H., alumina practically free from silicic acid from alkaline-earth aluminates, (P.), B., 1202.

Lonza-Werke Elektrochemische Fabrik Ges.m.b.H. See Lonza Elektriztätswerke & Chem. Fabr. Akt.-Ges.

Loofbourow, J. R. See Fardon, J. C., and Sperti, G. S.

Loofman, H. See Alten, F.

Lookeren Campagne, G. J. van. Seo Gorter, E.

Loomis, A. G., and Gulf Res. & Development Corp., flocculation in oil-well strata, (P.), B., 1160.
Teplitz, A. J., Ambrose, H. A., and Gulf

Res. & Development Corp., treatment of [oil] wells, (P.), B., 520. Sec also Hund, W. J.

Loomis, E. G., mixing machine, (P.), B., 3.

Loomis, F. W. See Kusch, P. Loomis, R. J. See Mason, S.

Loomis, R. N., and Bogen, E., biological effects of beryllium, A., III, 133. Loon, J. van, saflower oil, B., 586.

See also Steger, A.

Loon, M. van, and Wibaut, J. P., bromination of bromo-, chloro-, and fluoro-benzene in the gas phase; effect of temperature and catalyst on the substitution type, A., II, 450. See also Wibaut, J. P.

Loonan, A. C. See Gleason, G. H. Looney, J. M., and Jellinek, E. M., oxygen and carbon dioxide content of the arterial and venous blood of normal subjects, A., III, 369.

Loop, W. See Schlubach, H. H.
Loose, L. See Pearsall, W. H.
Lopatin, L. V., and Soldatov, B. J.,
polymerisation of hydrocarbons of synthetic rubber manufacture into a paint vehicle on a plant scale, B., 810.

Lopatto, E. K., and Schapiro, M. J., kinetics of oxidation of sulphur dioxide by oxides of nitrogen in sulphuric acid solution, A., I, 366.

Lopez, J. See De Guevara, J. Lorand, E. J., and Georgi, E. A., mechanism of cellulose benzylation, B., 1186. Lorant, S., micro-determination of sulphur

in blood, A., III, 166.

and Herzog, A., determination of ethereal sulphur in serum and urine, A., III, 448.

Lorber, G. See Meeraus, W.

Lorch, A. E. See Rosenthal, R. Lord, E., and Webster, W. K., reinforced india-rubber [valves] and other plastic articles, (P.), B., 474.

Lord, G. See Brit. Celanese. Lord, H. See Walmsleys (Bury), Ltd. Lord, J., experiences of de-airing applied to wire-cut brick manufacture, B., 1208.

Lord, J. O., critical analysis of statements and experiments on adherence of sheet-steel groundcoats, B., 548.

See also Connelly, D. S. Lord, J. T., purification of liquors, (P.), B., 511.

Lord, R. C., jun., Ahlberg, J. E., and Andrews, D. H., calculation of heat capacity curves of crystalline benzene and hexadeuterobenzene, A., I, 505.

and Andrews, D. H., entropy and the symmetry of the benzene molecule, A., I, 175.

and Blanchard, E. R., entropy of carbon tetrachloride, A., I, 21.

and Teller, E., structure of benzene. X. Intensities of the Raman lines in benzene and hexadeuterobenzene, A., I, 599.

and Wright, N., infra-red absorption spectrum of carbon suboxide, A., I, 495.

Lord, $S_{ij}^{(i)}$ See Hindle, $T_{ij}^{(i)}$ $\stackrel{\text{def}}{=} N_{ij}^{(i)}$ $\stackrel{\text{def}}{=} N_{ij}^{(i)}$ Lord Investment Corporation Ltd., Zug, artificial ageing of wines, alcoholic liquors, etc., by ultra-violet irradiation, (P.), B., 1396.

Lorenz, F. See Franke, W. Lorenz, K. H. See Klosky, S. Lorenz, O. T., fumigating foods with hydrogen cyanide gas, B., 389.

Lorenz, W., rapid determination of bacterial count [of milk], B., 971. Cheese with added meat, B., 973.

Lorenz Akt.-Ges., C., treatment of bodies by electromagnetic radiation, (P.); B.,

Lorenzini, G., aqueous solutions of fatsoluble vitamins, A., III, 280. Vitamin [-C] content of Hibiscus sabdariffa, L., A., III, 364.

Loria, S., and Klinger, J., diffraction experiments with electrons of moderate energy, A., I, 351.

Lorig, C. H., and Krause, D. R., [phosphorus in low-carbon, low-alloy steel],

Loring, F. H., contribugal spraying machines, (P.), B., 633, 1149.

Loring, H. S., and Stanley, W. M., isolation of crystalline tobacco mosaic virusprotein from tomato plants, A., III, 147.

and Wyckoff, R. W. G., ultracentrifugal isolation of latent mosaic virusprotein, A., III, 489.

See also Du Vigneaud, V.

Loring, R. A. See Green, J. B.

Lormand, C., and Gesteau, P., rotatory power of some alkaloids, A., II,

Los Angeles Club, alkyd-phenolic [resin] blends in spar varnishes, B., 62. Losana, L., Goria, C., and Rossignoli, G.,

chemical composition and properties of refractories, B., 550.
Losch, B. J. See Cunningham, G. L.

Loschkomoinikov, A. I. See Levina, R.J.

Losenhausenwerk Düsseldorfer Maschinenbau Akt.-Ges., testing of materials, (P.), B., 100.

Losev, I. P., Kotrelev, V., and Fegina, A., condensation of butaldehyde with phenols, for preparation of plastic masses, B., 1369.

Petrov, G., and Kotrelev, V., condensation of aromatic aldehydes with phenols, B., 1085.

Sec also Schorigin, P. P.

Losik, J. See Menschikov, G. Loskit, K., artificial radioactivity, A., I,

212. Lossier, H., shrinkage and non-shrinking

cements, B., 1344. Lothian, G. F., photo-electric method of

measuring $p_{\rm H}$ values with indicator solutions, A., I, 578.

Lothrop, R. E., potential alkalimity of honey: its acid-base value as a food, A., III, 262.

Lothrop, W. C. See Fieser, L. F.

Lotorev, Ermakov, Artamanov, and Egorov, Paris green, B., 826.

Lott, W. A., Jurist, A. E., and Squibb & Sons, E. R., therapeutic [arsenical] preparations, (P.), B., 981.

Smith, F. A., and Christiansen, W. G. preparation of divinyl ether, A., II, 226.

and Squibb & Sons, E. R., purification of ether, (P.), B., 1171.

Lottermoser, A., and Flammer, H., dispersion of calcium soaps by fatty compounds with [capillary-]active anions, A., I, 304.

and Fritzsche, H., potential and transport measurements on ferric hydroxido hydrosols, A., I, 460. Potential and transport measurements with ferric oxide hydrosols. II., A., I, 514. and Frotscher, H., conductivities and

potentials of higher alkylpyridinium

chlorides, A., I, 309.

and Ghose, A. K., potentiometric titration of sodium salts of fatty acids, A., I, 311.

and Neubert, P., adsorption and desorption of dyes by straw, B., 130.

and Schmied, R., peptisation of hydrated oxides by conductometric titration, A., I, 304.

Lotz, R. Sec Laibach, F.

Lotzkar, H. See Dickinson, R. G.

Lou, C. H., ehromatograms of biological stains on acid and basic adsorbents, A., III, 447.

Loubatières, A., micro-determination of liver- and muscle-glycogen in tissues, A., III, 192.

See also Cristol, P.

Loudon, J. D., preparation of camphor-10dichloroarsine from camphor-10-sulphinic acid, A., II, 220.

and Robson, T. D., mobility of groups in certain nitrodiphenylsulphones, A., II,

See also Gibson, D. T., and Livingstone,

Lougee, E. F., moulago at the Federal Bureau of Investigation, B., 1369.

Loughborough, D. \overline{L} ., and Stamm, A. J., molecular properties of lignin solutions from viscosity, osmotic pressure, b.p. elevation, diffusion, and spreading measurements, A., I, 183.

Loughlin, J. F., manufacture of solvents by fermentation, B., 279.

Loughlin, R. See King, F. B. Loughrey, C. T., and Hydrocarbon Foundation, Ltd., treatment of oils, (P.), B.,

Loughridge, D. H. See Skramstad, H. K., and Soltau, D. L.

Louis, viscosimeter with removable capillary, A., I, 268.

Louisiana Oil Refining Corporation. Seo Pierce, R. B.

Loumos, S., effect of dietary fats on the action of thyroid extract, A., III, 75.

Loupe, B. A. See Standard Oil Development Co.

Lourau-Dessus, M., electrophoresis of immune sera, A., III, 251.

Lourie, E. M., Murgatroyd, F., and Yorke, W., chemotherapy. II. Diffusibility of aromatic arsenicals into crythrocytes: action of the latter on quinquevalent arsenicals, A., III, 136.

Louttit, J. E., smokeless fuel and byproducts from a 20-ton [Coalene lowtemperaturo carbonisation] plant at Tacoma, Washington, B., 862.

Louw, J. M. See Theron, J. J.

Louwerse, M. W. See Snock, J. L.

Love, W. H., and Smith-White, W. B., field distortion in the standard ionisation chamber, A., I, 267.

Lovelace, F. E. See Carpenter, D. C. Lovell, A., Biddles, W. J., and Linn, M. A., distillation of shale, coal, and similar materials, (P.), B., 519.

Lovell, A. C. B., electrical conductivity of thin metallic films. I. Rubidium on pyrex glass surfaces, A., I, 121. Electrical conductivity of thin films of the alkali metals spontaneously deposited on glass surfaces, A., I, 229. See also Appleyard, E. T. S.

Lovell, E. L. See De Lisle, F. A.
Lovell, S. P., and Beckwith Manufg. Co.,
[difficultly combustible] shoo stiffener manufacture, (P.), B., 476.
Lovell, W. G. See Campbell, J. M., and

D'Alleva, B. A.

Loventhal, J., tests of waterproofing materials [for concrete], B., 1055.

Lovern, J. A., fat metabolism in fishes. XI. Specific peculiarities in depôt fat composition, A., III, 260.

Edisbury, J. R., and Morton, R. A., new source of vitamin-A, A., III, 439. See also Edisbury, J. R.

Lovi, R. A. See Tananaev, N. A. Low, A. H., Whitehead, C., and Vogl, A. L., cigarette, (P.), B., 499.

Low, A. J., soil profiles developed on lime-stone of the upper inferior oolite, near Doulting, Somerset, B., 1095. Low, G. W., jun. See Beebe, R. A.

Low Temperature Processing Co. Sec Zorn,

Lowan, A. N., operational determination of Green's functions in theory of heat conduction, B., 852.

Lowater, F., and Murray, M. M., chemical composition of teeth. V. Spectrographic analysis, A., III, 251. Lowe, A. Seo Batty, J. W.

Lowe, A. R. See Imperial Chem. Industries.

Lowe, B. See Nelson, V. E. Lowe, C. S. See White, C. E. Lowe, D. V. See Cobb, R. M.

Lowe, E. I., and Frisken, J., experiences of use of instruments as aids to plant control, B., 399.

Lowe, E. W., p-phenylenediamine [as photographic developer], B., 731.

Lowe, J. T., and Steenbock, H., cereals and rickets. VIII. Intestinal hydrolysis of phytin, A., III, 17.

Lowe, W. G. Sec Brit. Celanese.

Lowe Corporation, J. See Rosner, H. I. Lowen, I.S., effect of nuclear motion in the Dirac equation, A., I, 163.

Lowen, L., Anderson, L., and Harrison, R. W., cereal flours as antioxidants for products; halibut-liver and fishery salmon oils, B., 366.

Lowery, H., Wilkinson, H., and Smare, D. L., influence of the polished surface on optical constants of copper as determined by the method of Drude, A., I, 19. Optical constants of alloys of the copperzine system, A., I, 455.

Lowes, A. P. See Imperial Chem. Industries.

Lowman, A. See Gurchot, C., and Moodey, C. R.

Lowman, M. S. See Nelson, E. K., and Sievers, A. F.

Lowndes, H. See United Wire Works (Birmingham).

Lowndes, J. See Plimmer, R. H. A. Lowrance, E. W. See Whitaker, D. M.

Lowry, A. S., rot-proofing jute fibres, yarns, and fabrics, (P.), B., 434. Compound paper, (P.), B., 1324.

Lowry, C. D., jun. See Universal Oil

Products Co. Lowry, E. F. See Westinghouse Electric & Manufg. Co.

Lowry, E. M., instrument for measurement of graininess of photographic materials, B., 622

Lowry, M. W., Huggins, W. C., and Forrest, L. A., effect of soil treatment on mineral composition of exuded maize sap at different stages of development, B., 72.

Lowry, R. D. See Dow Chem. Co. Lowry, T. M., and Baldwin, W. C. G., rotatory dispersion. XXX. Campholic

aldehyde, A., I, 170. and Seddon, R. V., properties of nitrogen oxides. VI. Flame propagation in the system nitric anhydride-ozone, A., I, 521.

Lowry, W. W. See Keck, W. E. Lowy, A. See Kane, H. L., and Phillips, J. Loy, W. C., Hilton, J. H., Wilbur, J. W., and Hauge, S. M., rate of change of vitamin-A content of milk, B., 489.

Lozano, J. See Andréu Urra, J. Lozier, W. W. See Smith, P. T. Lozinski, N., and German, S., gas-permeability of refractories, B., 440.

Lozovoi, A. V., and Charlampovitsch, A. B., destructive hydrogenation of peat producer tar, B., 107.

Djakova, M. K., and Stepantzeva, T. G., certain physical constants of mixtures of hydrocarbons, A., I, 463.

See also Djakova, M. K.

Lozovskaja, I. See Bartenev, S. Lu, G. D. See Platt, B. S. Ln, S. S. See Bradley, A. J.

Lub, (Mlle.) W. A., optical spectrum of actinium, A., I, 336.

Lubatti, O. F., determination of fumigants. VII. Determination of sulphur dioxide and sulphur trioxide from burning sulphur, B., 34.

See also Page, A. B. P.

Luber, K., two practical laboratory hints, A., I, 100.

Lubimoff, W. See Kuntze, W Lubnikova, M. G. See Gaaz, F. V.

Lubri-Zol Development Corporation. See Prutton, C. F.

Sce Lubrication Control Corporation. Booth, \overline{H} . T.

Lubriplate Corporation. See Watts, R. L. Lubs, H. A. See Du Pont de Nemours & Co., E. I.

Luby, E. L. See Babcock & Wilcox, Ltd. Lucas, A. M. See Cowdry, E. V. Lucas, C. C. See Hall, G. E.

Lucas, G. H. W., and Henderson, V. E., administration of iron, B., 728.

Lucas, H. J., and Prater, A. N., isomerie

Al²-pentenes, A., II, 438.
See also Eberz, W. F., Frieman, R. H.,
Wilson, C. E., and Winstein, S.
Lucas, K. H. See Emicke, O.
Lucas, O. D. See Pleydell-Bouverie, C.

Lucas, R., specific heats of liquids and gases, A., I, 21. Absorption and diffusion of supersonic waves and the structure of liquids, A., I, 293.

and Biquard, P., diffusion and absorption of ultrasonics in liquids, A., I, 122.

Lucas, V., specificity of the magnesium hypoiodite reaction, A., I, 149. Chemical incompatibility between yatrene and some mineral salts, A., II, 127.

Lucas, Ltd., J., Miller, J. L., and Roberts, S., attachment of iron parts to non-ferrous metal or other bodies, (P.), B.,

and Spencer, G. D., electric storage batteries, (P.), B., 461. Separators for electric storage batteries, (P.), B., 804.

Lucasse, W. W. See Miller, J. G. Lucente, G., and Barnaba, M., oil from

immature olives, B., 806.

Lucia, S. P., Aggeler, P. M., Husser, G. D., and Leonard, M. E., effect of adrenaline on blood count and on hæmatocrit value, A., III, 411.

and Brown, J. W., sedimentation of erythrocytes in solutions of albumin, fibrinogen, and peptone, A., III,

Gospe, S. M., and Brown, J. W., sedimentation of erythrocytes in globulin solutions, A., III, 53.

Lucidol Corporation. See Hooft, F. V. Luck, J. M., and Martin, Douglas, liver proteins. 295. II. Albumin, A., III,

See also Davis, B. L., jun,

Lucké, B. See Goldschmidt, Samuel. Luckert, H. J. See Schramm, J. Luckmann, H., fixation of ammonia by superphosphate, B., 707.

Luckow, C., fundamentals of alcohol determination in spirituous liquors containing extract, using the test still, B., 177. Examination of process water, B., 626. Alcohol determination, B., 719. Starch syrup in the liqueur industry, B., 828. Problems of the fruit syrup industry, B., 1126.

Luckow, E. R., eliminating inaccuracies in present official method for [determining]

free alkali [in soap], B., 58.

Ludeman, C. G. See Texas Co.

Ludewig, H. See Auwers, K. von.

Ludewig, S., Williams, E. T. R., and

Chanutin, A., renal insufficiency pro-Relationship of urine-urea, blood-urea, and urea (Addis) ratio in rats on whole dried meat diets, A., III, 14. See also Chanutin, A.

Ludington, L. L. See Ball Bros. Co.

Lndlam, E. B., Pryde, A. W., and Rule. H. G., optical rotatory power of turbid solutions in an electric field, A., I, 499.

See also Smith, William, and Walls, H. J. Ludmila, J. See Šimek, B. G.

Ludowici Celadon Co. See Mooney, T. F. Ludueña, F. P., antagonism between adrenaline and isoquinoline derivatives: cotarnine and anhydrocotarnine-Nmethyloxindole, A., III, 267.

Ludwiczak, (Mlle.) R., and Suszko, J., alloquinidine, a carbinol isobase obtained

from quinidine, A., II, 217.

Ludwig, C. A., and Allison, F. E., diffusion of nitrogenous compounds from healthy legume nodules or roots, A., III, 366.

Ludwig, E. See Schöberl, A. Ludwig, F. See Gordonoff, T.

Ludwig, Walter, pigmenting of bituminous paints, B., 157.

Ludwig, Willy, and Mutzenbecher, P. von, production of thyroxine by iodination of protein, A., II, 40.

Luebbers, R. H. See Levine, M.

Lückerath, W., improvement of steel rails by transformation of primary structure in base of rail during rolling, B., 561.

Lüdecke, H. See Krüger, IV., and Wimmer, G.

Lüdtke, M., present-day problems of the bast fibre-producing industry, B., 766. Lüers, H., water for brewing, B., 484.

Protein problems in beer, B., 966. Wood-saceharification processes,

1393.

Lüers, H. [with Fries, G., Hüttinger, W., Mörike, E., Enders, C., Kärnbach, K., and Wieninger, F.], fermentability of the wood-sugar worts of the Scholler-Tornesch process, B., 278.

and Mörike, E., biological protein synthesis, A., III, 33.

Lueg, W., hot-rolling of medium hard carbon steels, B., 679. See also Enders, W., and Pomp, A.

Lühder, E., preparation of fodder protein, in form of dried wash, in agricultural potato distilleries and potato-drying plants, B., 390. Modernising potatoflake plant and erection of new potato drying plant, B., 616. "Diaspirit" as

substitute for green or kilned malt in distilleries using starchy raw materials, B., 1394.

Luengo, N., determination of serum-phosphorus, A., III, 4.

Lüppo-Cramer, Capri-blue effect and [photographic] ripening process, B., 89. Destruction of ripening nuclei by desensitisers, B., 188. Ripening state and regression processes in photographic layers, B., 292. Intermittent exposure and destruction of [photographic] nuclei, B., 292. Sensitising desensitisers and desensitising sensitisers, B., 292. Isolation of nucleic and of grains in photographic layers, B., 394. [Photographic] image reversal by diffuse after-exposure, B., 500. Rôle of protective colloids in photography, B., 500. Silver bromide films free from protective colloid, B., 843. Syneresis phenomena with silver iodide, B., 981. Silver bromide layers free from binding agent, B., 982. Grain size and light-sensitivity of bromide, B., 1136. Barrier silver Barrier layers (Sperrschichten) [in photographic emulsions], B., 1274. Luerssen, G. V., and Greene, O. V., inter-

pretation of torsion impact properties of

carbon tool steel, B., 791.

Lütgert, H., mobility of the iodoxy-group in I-iodoxy-2:4-dinitrobenzene, A., II,

Lüth, F., condition of development of continuous-annealing furnaces for thin

[steel] sheets, B., 682.

Lüttringhaus, A., polymembered ring systems. X. New dihydroxybenzene and dihydroxynaphthalene derivatives. XI. Form of the diphenyl and diphenylmethane molecules. XII. Valency angle of the oxygen atom in derivatives of diphenyl ether, A., II, 301.

and Ziegler, K., polymembered ring systems. VIII. New application of the dilution principle, A., II, 300. See also Ziegler, K.

Lufkin, G., and Owens-Illinois Glass Co., glass furnace, (P.), B., 672.

Luft, A. See Klanfer, K., and Sagoschen,

Luft, K. F. See Meissner, K. W.

Lugaskov, A. S., influence of alloying elements on aluminium and magnesium alloys, B., 450.

Lugg, J. W. H., mercuric salts and nitrous acid in the colorimetric determination of tyrosine and tryptophan present in solution, A., III,

and Josland, S. W., colorimetric determination of cobalt by nitroso-R-salt, A., I, 150.

Lugg, J. W. H., Macbeth, A. K., and Winzor, F. L., colouring matters of Drosera Whittakeri. V. Constitution of droscrone, A., II, 460.

Lugovkin, B. P. See Postovski, I. J.

Luhr, O., and Male, C. T., jun., negative ions in oxygen and hydrogen, A., 1, 542. and Studer, F.J., spectroscopic study of the magnetron discharge, A., I, 207.

Luisenko, A. N., influence of molten aluminium on firebrick linings of

electric furnaces, B., 450. Lukasch, I. K. See Tischtschenko, F. E. Lukascheva, E. N. See Korenman, I. M. Lukaschevitsch, V. O., reduction of arc-

matic nitro-compounds. II., A., II, 12.
Lukaschina, N. F. See Rubinstein, A. M.
Lukavenko, T. See Petrov, G.
Luke, C. L. See Clarke, B. L.
Luke, F. A. B. See Gen. Asphalte Co.
Lukens, F. D. W., pancreatectomy in the pig A. III. 384 pig, A., III, 384.

Lukens, H. S., and Hunt Pen Co., C. H., pen, (P.), B., 933. Pen point, (P.), B., 933. Gold plating, (P.), B., 933.

and United Chromium, control of chromium-plating solutions, (P.), B., 801.

Lukeš, R., and Grossmann, O., action of the Grignard reagent on amides. XI. Synthesis of 1-methyl-2-alkyl- (arylor arylalkyl-)3:4:5:6-tetrahydropyridines, A., II, 113.

and Přeučil, J., action of Grignard's reagent on ethyl 1-methyl-2-pyrrolone-

5-acetate, A., II, 30. and Sperling, V., action of the Grignard reagent on the amides. X. Synthesis of pyrrolones and pyrroles from s-diphenylsuccinic acid, A., II, 30. Lukin, K., rapid bleaching of liquid toilet

soaps, B., 57.

Lukirski, P., surface ionisation, A., I, 337. Lulek, R. N. See Du Pont de Nemours & Co., E. I.

Lumb, C. F., gas masks, (P.), B., 398. Coating of metal and other surfaces, (P.), B., 1228.

humoral medicine and Lumiere, A.,

chemistry, A., III, 298. and Meyer, P., effect of intravenous injections of suspensions of solids on blood-sugar, A., III, 3. Effect of intravenous injection of granules of inert

solids on heat production, A., III, 83. Meyer, P., and Vergne, H., effect of intravenous injections of suspensions of solids on blood-chloride, A., III, 54.

and Monchal, S., effect of intravenous injections of magnesium thiosulphate on blood-cholesterol, A., III, 84.

Lummus Co. See Collins, R. R., Coubrough, G. B., and Kraft, W. W.

Lumpkin, L. B., co-ordinated valve operation, B., 853.

Lumsden, C. H. See Imperial Chem.

Industries.

Lun, F., insulin tannate, A., III, 403.

Lund, A. See Hansen, A. Lund, A. A., and Royal Baking Powder Co., flavouring material, (P.), B., 979.

Lund, Hakon, aluminium isopropoxide as reducing agent; reduction of carbonyl, A., II, 364.

Lund, Helge, new applications of magnesium in organic synthesis. II. Barbituric acid condensations, A., II, 117.

and Lieck, H., stability of ascorbic acid in urine and in aqueous solution; effect of conditions in the urinary tract, A., III, 233.

Lundbäck, T. A. I., and Aktieb. Mo Ooh Domsjö Wallboard Co., hard products [wallboards], (P.), B., 350. Hard board, (P.), B., 431.

Lundberg, W. O., Vestling, C. S., and Ahlberg, J. E., electrode potential of the iodine-iodate electrode at 25°, A., I, 187.

See also Ahlberg, J. E.

Lunde, G., seaweed as a source of raw

material, B., 1389.

Aschehoug, V., and Kringstad, H., feeding experiments with canned food packed in aluminium containers, B., 1401.

and Closs, K., effect of feeding seaweed on iodine content of milk and dairy products, A., III, 200.

Heen, E., and Oy, E., fucoidin, A., III, 322.

Lundegardh, H., anion respiration, A., III, 237.

Lundell, G. E. F., and Knowles, H. B., chemistry of rhenium, A., I, 421. See also Hoffmann, J. I.

Lundgren, E., pulverising mill, (P.), B.,

Lundgren, H. P., catalytic determination of

iodine, A., I, 197. Lundin, G. See Wesström, N. Lundquist, J. T. See Dow Chem. Co.

Lundqvist, D., and Westgren, A., crystal structure of Cu₃VS₄ [sulvanite], A., I, 17. Crystal structure of bornite, Cu₅FeS₄, A., I, 400.

Lundsgaard, E. See Hevesy, G. von. Lundsgaard, E. C. See Hahn, L. A. Lundsgaard, H. C., agents for stabilising aqueous suspensions or emulsions, and for increasing the hydrophilic capacity thereof, (P.), B., 21.

Lundsteen, E., and Vermehren, E., microdetermination of phosphatases in bloodplasma and inorganic phosphorus in

blood, A., III, 4.

Lundstrom, F. O., and Whittaker, C. W., chemical reactions in fertiliser mixtures; effect of ammoniation on urea component of superphosphate mixtures, B., 270. Decomposition of nitrosyl chloride, (P.), B., 669.

Luneau, R., ferric salts as precipitants in the extraction of certain heterosides, A., III, 504.

Lung, K. H. See Hess, K.

Lunskaja, Z. N. See Dubovitzki, A. M. Lunt, R. W., chemical reaction in electric discharges. II. Chemical activity of ions, A., I, 91.

and Meek, C. A., ionisation, excitation, and chemical reaction in uniform electric fields. II. Energy balance and energy efficiences for principal electron processes in hydrogen, A., I,

Meek, C. A., and Smith, E. C. W. ionisation, excitation, and chemical reaction in uniform electric fields. III. Excitation of the continuous spectrum of hydrogen, A., I, 286.

See also Emeléus, K. G.

Luppino, G. See Caizzone, G. Lupton, H. R. See Hathorn, Davey & Co.

Lupu, H., blood of Cobitis fossilis. II. Periodic cycle of variation in composition and relation of certain states of the blood to respiration, A., III, 163.

Lurie, J. J., and Ginsburg, L. B., rapid determination of lead-zinc ores, concentrates, and products, B., 1064.

Lurie, J. J., and Ginsburg, L. B., internal electrolysis without diaphragms; determination of copper and bismuth in

lead-zinc ores, B., 1353, and Neklutina, V. F., determination of zinc in cadmium, B., 449.

and Troitzkaja, M. I., determination of cadmium by internal electrolysis, A., I, 531. Determination of cadmium in zinc concentrates and in metallic zinc, B., 49, 684. Determination of tin in ores, B., 570. Colorimetric determination of cobalt in metallic nickel, B., 795. Determination of copper in metallic nickel, B.,

795. Determining tin in ores, B., 1064. Lurie, J. S., and Vorotuintzey, S. I., stability of the lining of the Leningrad

cement plant, B., 784. Lurie, S. N., and Kolbin, N. I., stabilisation of concentrated solutions of hydrogen

peroxide, B., 1045.

Lushy, O. W. See Huff, W. J.

Lush, E. J. See Neumann, E.

Lushnaja, N. P., system sodium and thallium nitrates, chlorides, and sulphates, A., I, 82

See also Kurnakov, N. S.

Lusignani, G., See Mascherpa, P.

Lustig, B., chemistry of cancer, A., III, 123. and Ernst, T., protein-sugar, protein content, and carbohydrate index of sera and body-fluids of different animals, A., III, 194.

Ernst, T., and Reuss, E., blood composition in summer and winter of Helix

pomatia, A., III, 195.

and Schmerda, F., hydrolysis of sodium soaps in aqueous solution, B., 462.

Tüchler, K., determination urinary hydroxyproteic acids and its diagnostic importance, A., III, 88. See also Lasch, F.

Lut, F. A., significance of potassium in the system of fertilising sugar-beet rotations. B., 709.

Lute, R. See Braun, J. von.

Luteuberg, A., and Dudkina, T., Bertram's method for determining saturated [fatty] acids, B., 365.

See also Ushakov, M.

Luth, A. T., Nugent, R. A., Christian, N. H., and Nekoosa-Edwards Paper Co., treatment of pulp, (P.), B., 129. Bleaching of pulp, (P.), B., 129.

Luthra, H. R., automatic water regulator, A., I, 333.

Luthra, R. K. See Bhatnagar, S. S. Lutikova, O. T. See Rubin, B. A.

Lutkin, F. E., electrolytic recording of weak electric currents, A., I, 635.

Lutschinski, G. P., temperature dependence of viscosities of the tetrachlorides of the fourth group of the periodic system, A., I, 22. Chlorosulphonate-chlorides of titanium A., 1, 41. "Dichlorotitanium hexaehlorosulphate," A., I, 243. Viscosity of ideal mixtures, A., I, 295. Colorimetric determination of phenol, B., 415.

and Lichatscheva, A. I., mixed halides of bismuth, A., I, 146. System POCl₃-SO₂Cl₂. II. Vapour composition and pressure, A., I, 296. Dichlorosulphuryl chlorosulphonate, A., I, 321. Phase equilibria in systems containing sulphuric and hydrochloric acids. I. Tensimetric investigation of the system H₂O-HCl-H₂SO₄, Ā., I, 363. See also Lichatscheva, A. I.

Lutwak-Mann, C. See Dixon, M.

Lutz, H., application of polymeric synthetic materials in manufacture of tubing, B.,

Lutz, J. F., relation of free iron in the soil to aggregation, B., 1096. See also Baver, L. D.

Lutz, J. M. See Culpepper, C. W.

Lutz, R. E., and Lytton, M. R., oxidationreduction potentials of a series of nitrosobenzene-phenylhydroxylamine systems, A., I, 465.

Lutz, R. P. See Western Electric Co. Lutze, E., mutual excitation of hydrogen and argon by atomic impact, A., I,

Lutzenko, J. S., rapid determination of nitrite in presence of large amounts of sodium chloride and organic substances

in meat extracts, B., 973. Luwisch, D. See Koops, W. S.

Lux, L., suitability of eloxal[-treated aluminium] for heat-exchange apparatus. B., 1357.

Luxford, R. F. See Pillow, N. Y.

Luyckx, A., action of iron oxide on the emission spectrum of nitrogen-mercury systems excited by a-rays, A., I, 336.

Luyet, B. J., cellular death at high pressures; action of heat and pressure on yeast; death in yeast, A., III, 315, 484. Lethal effect of high pressures on cells; intensity and duration of lethal pressures with yeast, A., I,,, 315.

and Hodapp, E. L., cellular death at high pressure; compression of yeast in sodium chloride solutions, A., Ill,

Luyken, A. See Rheinboldt, H.
Luyken, W., and Kraeber, L., magnetic dressing of Lower Silesian bog-iron ore, B., 788.

See also Kraeber, L.

Luzanski, N., application of vacuum distillation, A., I, 50. Arsenic content of bees from plantations sprayed with arsenical insecticides, B., 74.
Luzzati, S., and Molinari, C., wood tile for

flooring and panelling, (P.), B., 677.

Lvov, A., and Lvov, M., physiological rôle of the codehydrogenases for Hæmophilus parainfluenzæ, A., III, 36. Codehydrogenases. I. Nature of growth factor "V." II. Physiological function of growth factor "V," A., III, 219. Physiological rôle of hæmin for Hæmophilus influenzæ, Pfeiffer, A., III, 397. Function of hæmin as growth-factor for Hæmophilus influenzæ, A., III, 487.

and Pirosky, I., determination of the growth factor for Hæmophilus ducreyi, Ă., III, 226.

See also Kögl, F.

Lvov, A. M., preparation of tripansin, B. 839.

Lvov, M. See Lvov, A. Lvov. V. N., polymerisation of divinyl by sodium in presence of isobutylene, A., II, 316.

Lycan, W. H. See Du Pont de Nemours & Co., E. I.

Lydén, R., behaviour of chromic oxide to alkali halogenate solutions. III. Reaction system chromic oxide-chlorate and influence of sparingly soluble carbonates as reaction components in systems chromic oxide-chlorate and chromic oxide-bromate, A., I, 373. Oxidation of chromic oxide by silver oxide, A., I, 629.

Lykken, H. G., Estabrook, J. B., and Dorr Co., water softening, (P.), B., 630.

Lyle, A. K., glass composition calculations, B., 670.

Lyman, C. M., and Barron, E. S. G., biological oxidations. VIII. Oxidation of glutathione with copper and hæmochromogens as catalysts, A., III, 450.

Schultze, M. O., and King, C. G., effect of metaphosphoric and other inorganic acids on catalytic oxidation of ascorbic acid, A., I, 368.

Lyman, E. M., β -ray spectra of radium-E and radioactive phosphorus, A., I, 107.

Lyman, T. R., and Rees, W. J., chrome-alumina bricks. I. and II., B., 550. Mixtures of chromite and Grecian magnesite, B., 550.

Lynch, D. F. J. See Wells, P. A.

Lynch, G. R., detection of inhaled hydrocyanic acid, A., III, 391.

Lynch, H. J. See Christensen, B. V.

Lynch, J., earth's core, A., I, 204. Effect of occluded hydrogen on the rigidity of metals, A., I, 556.

Lynch, L. J. See Herbert, D. A. Lyne, R. R. See Haworth, W. N.

Lyness, A. S., varietal differences in phosphorus-feeding capacity of plants, A., III, 237.

Lynn, E. G.See Englis, D. T.

Lynn, E. V. See Desantis, F. J., Larsen, K. E., and Monarca, C. J.

Lynn, H. S. See Mott, G. A.

Lyon, C. E. See Windecker, C. N.

Lyon, D. M., and Dunlop, D. M., mandelic acid in treatment of urinary infections, A., III, 206.

Lyon, K. C. See Parmelee, C. W. Lyon, S. W. See Moore, H. F. Lyon, T. L., residual effects of some

leguminous crops, B., 72. and Bizzell, J. A., lysimeter experiments.

IV., B., 821. Lyon, W. K. See Ellis, J. W.

Lyons, C. G., and Appleyard, F. N., determination of official preparation of iron by means of ceric sulphate. I. Assay of saccharated iron carbonate, B., 85.

Lyons, F. H., and Bruce Co., E. L., impregnating composition for wood, etc., (P.), B., 1210. Insecticide, (P.), B., 1255. Lyons, M., and Insko, W. M., jun., chon-

drodystrophy in chick embryo produced by a mineral deficiency in diet of the

hen, A., III, 475. Lyons, R. E. See Daniels, T. C. Lyons, W. J., behaviour of the 4930 A. absorption band of uranine solutions under high pressure, A., I, 280.

and Poindexter, F. E., spectrometer for studies at high pressures, A., I, 331.

Lyons, W. R., preparation and assay of mammotropic hormone, A., III, 184.

and Templeton, H. J., intravaginal assay of urinary cestrin, A., III, 41.

See also Koneff, A. A.
Lyons & Co., Ltd., J., and Cohen, V. L.,
regeneration of bakery products, (P.), B., 977.

Lyot, B., spectrum of solar corona in 1936; wave-lengths and intensities, A., I, 105. Lysaght, V. E., indentation hardness test-

Lyshede, J. M., and Rasmussen, E., nuclear moment of the zinc isotope 67Zn, A., I, 157.

Lyth, R., molecular distillation of petroleum lubricating oils, B.; 518. See also Twort, O. O.

Lythgoe, R. J., absorption spectra of visual purple and of indicator-yellow, A., III, 340.

See also Durtnall, H. J. A.

Lytle, A. R. See Union Carbide & Carbon

Lytle, C. K., non-spangled galvanised sheet, (P.), B., 580.

Lytton, M. R. See Lntz, R. E.

M.

M.-O. Valve Co., Ltd., and Clayton, F. D., electrical insulators for thermionic valves etc., (P.), B., 1364.

M. & R. Dietetic Laboratories. See Otting, H. E.

Ma, C., preparation of iodine from sea-weeds. I. Dry distillation of seaweeds, B., 542.

See also Liu, S. K. Ma, C. C. See Davis, T. L.

Ma, W. C. See Cheng, C. L. Maas, A. J., scheme for air defence and protection; active protection regulations,

Maas, H. See Winkel, A.

Maasdorp, R. See Kempton, A. E. Maaskant, L., determination of furfuralde-

hyde and hydroxymethylfurfuraldehyde with p-nitrophenylhydrazine, A., II, 130. Chloro- and bromo-nitrophenyl-hydrazines and -methylhydrazines and their derivatives, A., II, 187. See also Gorter, E.

Maass, H., hard secondary radiation of ultra-radiation, A., I, 6.

Maass, O., opacity measurements [on paper], B., 126.

and Geddes, A. L., persistence of the liquid state of aggregation above the critical temperature; ethylene, A., I,

See also Calhoun, J. M., Corey, A. J., De Montigny, R., Holder, C. H., Larocque, G. L., Russell, J. K., Shipley, J. H., and Walker, F.

Maassen, G., use of the polarograph in ironworks laboratories for determination of copper, nickel, and cobalt in presence of one another in steels, B., 792.

See also Thanheiser, G.

Mabag Maschinen- & Apparatebau A.-G., and Neuroth, F., apparatus for separation of water, more particularly from liquid fuels, (P.), B., 520.

Mabb, P., acid pickling of non-ferrous metal components, B., 48. Inhibited pickling solutions in general finishing-shop practice, B., 682.

McAdam, R., nomographic determination of calorific values [of coals], B., 744.

McAfee, A. M., Crockett, L. O., and Gulf Oil Corp., improvement of [petroleum] lubricating oil, (P.), B., 1166.

MacAfee, M. W., flotation, (P.), B., 1337,

1361.

McAleer Manufacturing Co. See Weihe, F. A., jun.

McAlister, E. D., spectrographic method for determining carbon dioxide exchange between an organism and its surroundings, A., III, 240. Time course of photosynthesis for a higher plant, A., III, 285.

See also Flint, L. H. McAlister, L. C., jun., West Indian fruit fly at Key West in 1932-33, B., 603.

McAllister, C. B. See Texas Co.

McAllister, L. P., modern materials [steels] for high-pressure vessels, B., 791.

McAllister, R.W. See Du Pont de Nemours & Co., E. I.

McAllister, S. H. See Bataafsche Petroleum Maats., and Shell Development Co.

MoAllister, W. H., electrolysis of soap solutions, B., 462

Macallum, A. D. See Du Pont de Nemours

& Co., E. I.

McAnally, R. A., and Maclean, I. S., synthesis of reserve carbohydrate by yeast. III. Nature of the insoluble carbohydrate, A., III, 98.

Macara, T., science and the conservation of food, B., 977.

McArdle, E. H., "coal-tar" solvents from petroleum, B., 1297. Macarovici, C. G. See Spacu, G.

Macarovici, M. See Tanasescu, I.

McArthur, C. K., modern trends in [ore] classification, B., 926.

McArthur, C. S., and Watson, E. M., selenium dehydrogenation of a-tocopherol, A., II, 383.

Macary, S. See Mercier, F.

McAteer, J. H., and Seltz, H., thermo-

dynamic properties of zinc, cadmium, tin, and lead tellurides, A., I, 31. See also Montgomery, C. W.

McBain, J. W., [spinning-top ultracentri-fuge and sedimentation of small molecules], A., I, 100.

and Alvarez-Tostado, C., sedimentation equilibrium in the simplest air-driven

tops, A., I, 481. Ford, \hat{T} . \hat{F} ., and Wilson, D. A., surfaces

of ordinary solutions, A., I, 130. and McBain, M. E. L., spontaneous stable formation of colloids from crystals or from true solution through presence of a protective colloid, A., I, 131. Effect of departure from spherical shape on viscosity caused by colloidal particles and large molecules, A., I, 182.

and Stuewer, R. F., ultrafiltration through collophane of porosity adjusted between colloidal and molecular

dimensions, A., I, 181.
and Thomas, W. M., transference numbers of colloidal "ferric hydroxide," A., I, 79.

McBain, M. E. L. See McBain, J. W. Macbeth, A. K., and Price, J. R., action of bases on nitrophonylhydrazines. II., A.: II. 336.

See also Berry, P. A., and Lugg, J. W. II.

MacBeth, F. B., milling Uba cane and
milling in general, B., 75.

Macbeth-Evans Glass Co. See McGregor, R. R.

McBerty, F. H., pump maintenance, B., 853. McBride, B. V., easily applied tests for

evaluating organic finishes, B., 1088. McBride, C. E. See Langer, T. W. McBride, D. L. See Herty, C. H., jun.

McBride, R. S., food fumigation with ethylene oxide, B., 389. Industrial ethylene oxide, B., 389. Industrial system for fuel gas handling, B., 863.

McBride, S. R., and Fnog, H. L., forming of metals; [tough, fine-grained cast iron], (P.), B., 799.
McBryde, D. L., improvement of massecuite

circulation in coil pans, B., 717.

McBryde, W. See Bonnybridge Silica & Fireclay Co. McBurney, D. See Du Pont de Nemours & Co., E. I.

McBurney, J. W., and Parsons, D. E., wick tests for efflorescence of building brick, B., 1056.

McCabe, E. B. See Hiller, N. H. McCabe, L. C., significance of banded ingredients in [Illinois] coal, B., 101. Physical ovidences of development of rank in vitrain, B., 1291.

and Quirke, T. T., angle of polarisation as an index of coal rank, B., 309.

McCabe, W. L., the [Merkel] enthalpy-concentration chart, B., 1286.

McCaleb, A. G. See Allen, H. E. McCalla, A. G. See Sinclair, A. T. MacCallum, F. Seo Redfern, A. H.

McCallum, J., and Titanium Pigment Co., barium and calcium sulphates, (P.), B.,

McCampbell, C. W., Mackintosh, D. L., Hall, J. L., Pittman, M. S., and Kramer, M. M., factors influencing the quality and palatability of meat, B., 1401.

McCance, R. A., changes in plasma and cells during experimental human salt deficiency, A., III, 372. Carbohydrate metabolism during experimental human salt deficiency, A., III, 384.

and Watchorn, E., overbreathing tetany; changes in calcium of serum, serumultrafiltrates, and cerebrospinal fluid,

A., 111, 88.

and Widdowson, E. M., alkalosis with disordered kidney functions, A., III, 380. Absorption and oxerction of iron, A., III, 472.

See also Watchorn, E., and Widdowson, E. M.

McCandless, E. L. See Mehl, R. F. MacCardle, R. C., calcium deposits in nerve cells of white rats after injections of urea and cholesterol, A., III, 215.

McCarroll, R. H., laminated safety glass. B., 345.

Vennerholm, G., and Ford Motor Co., copper steel alloys, (P.), B., 690. Wear-resistant cast iron, (P.), B., 690. Cast steel, (P.), B., 690.

McCarthy, B. L., grain size and its influence on manufacture of steel wire, B., 790.

McCarthy. E. F., oxygen dissociation curves and osmotic pressures of hæmoglobins of different species, A., III, 110.

McCarthy, H. H. See Wilhelmi, C. M.

McCarthy. J. D., and Gen. Manganese Corp., extraction of values from manganese carbonate ores, (P.), B., 1047.

McCarthy, J. J., obtaining fingerprints, (P.), B., 189.

McCarty, B. Y. See Gee, W. P., and Texas

McCaskell, J. A., and McCaskell, W. M., gyratory crusher, (P.), B., 992.

McCaskell, W. M. See McCaskell, J. A. McCaughey, W. J., contribution of mineralogy to ceramio technology, B., 345.

and Lee, H. C., hearth refractories for

steel making, R., 1341.

McCauley, M. S. See Hitchins, R. M.

McCauley, R. B., immunising of [imparting corrosion-resistance to] metal articles, (P.), B., 931. Corrosion-resistant [iron]

alloys, (P.). B., 932.

McChesney, E. W., determination of alanine in biological materials, A., III, - 192.

and Swann, W. K., jun., identification of the amino-acids: p-toluenesulphonyl chloride as a reagent, A., II, 360.

Macchia, E., determination of indole in bacterial cultures, A., III, 276.

Macchia, O., and Sacchi, V. P., thickness of electrolytic deposits, and its determination, B., 578.

Macciotta, E., and Deffenu, (Signa.) V., nitroamines. VII. Phenetylnitroamines, A., II, 188.

McClain, H. K. See Hunt, H.

McClary, J. E. See Robbins, W. J. McClean, A. P. D., bunchy-top disease of tomato, A., III, 276.

McCleery, W. L., sugar technology; [clarification of refractory juices], B.,

McClement, C. S., and Smiles, S., rearrangement of o-hydroxy-sulphones. VI., A., II, 337.

McClendon, J. F., centrifugal separation of "colloid" from living thyroid gland, A., III, 56.

McCloskey, K. L. Sec Tui, C.

McCiner, W. B., Fenske, M. R., and Pennsylvania Petroleum Res. Corp., treatment of mineral oils, (P.), B., 1012.

See also Fenske, M. R.

McClure, C. H. See Kronenberg, M. H. McClure, G. M., movement of fertiliser salts in soils by capillarity, B., 819. McClure, G. S. See Cruickshank, E. W. H.

McClure, R. R. See Church, J. IV. Maccolini, R. See Rosa, A. Maecoll, A. Iredale, T.

McColl-Frontenac Oil Co., Ltd. Taylor, G. R., and Wales, J. A. Ltd: Sco

McCollum, E. V., recent advances in nutrition, A., III, 209. Nutritional aspects of milk pasteurisation, A., III. 209.

See also Prebluda, H.J.McCombie, H. See Cusa, N. W. McConnel, J. S. See Forbes, J. C.

McConnell, D., substitution of SiO4 and SO, groups for PO, groups in the apatite structure : ellestadite, the endmember, A., I, 587.

McConnell, E. B. See Standard Oil Co. McConnell, K. P., and Sinclair, R. G. passago of elaidic acid through tho placenta and into the milk of the rat, A., III, 173. Selection in the biological synthesis of lecithins and kephalins in brain, A., III, 173.

McConville, H. A., evaluating lubricating

greases, B., 1007.
McCool, S. G. See Cantarow, A.

McCord, W. M. See Veal, J. R.

McCormack, R. B. See Blodgett, F. M. McCormick, D. F., and Kaolin Processes, treating and filtering clay slip, (P.), B., 783.

McCornack, H., centrifugal apparatus for cleaning and conditioning air, (P.), B.,

MacCorquodale, D. W. See Thayer, S. A. McCortney, W. J. See Lee, R. K. McCowen, J. L. See Imperial Chem.

Industries.

McCoy, H. N., extraction of europium from monazite residues and preparation of pure europium compounds, A., I, 41.

[with King, A. S., Pauling, L., Baxter, G. P., and Tnemmler, F. D.], purification of europium, A., I, 421.

McCoy, R. H., and Rose, W. C., relation of glycine and serine to growth, A., III, 129.

McCrea, A., and Parke, Davis & Co., ergot preparation, (P.), B., 1273.

McCrae, $J_{\cdot,\cdot}$ dilution method of p_{II} determination. II., A., I, 260.

McCready, R. See Sandin, R. B.
McCrery, H. E., and Blaw-Knox Co., cement-handling plant, (P.), B., 787. McCrosky, C. R. Sce Coleman, W. C.

MacCubbin, A. A. See Barrett Co. McCullagh, D. R., and Stimmel, B. F.,

comparison of potencies of some androgenic sterols, A., III, 32I. See also Cnyler, W. K., and Stimmel,

B. F.MacCulloch, A. F., explosions arising from

ethers, A., II, 3. McCulloch, E. C. Sco Costigan, S. M.

McCulloch, Leon. See Westinghouse Electric & Manufg. Co.

McCulloch, Lucia, bacterial leaf spot of begonia, B., 958.

McCulloch, R. N. See Griffiths, E. McCullouch, W. S. See De Barenne,

McCullough, C. R., and Swann Res., Inc.,

acid alkali pyrophosphates, (P.), B., 35. McCullough, J. D., crystal structure of potassium chloro-osmate, K₂OsCl₂, and of potassium bromo-osmate, K2OsBr6, A., I. I7. Crystal structure of selenium

dioxide, A., I, 350.

McCullough, N. B. See McGinty, D. A.

McCullough, W. E., and Bohn Aluminum & Brass Corp., cadmium-cobalt bearing

alloy, (P.), B., 800.

McCune, D. J. See Culbert, R. W. McCurdy, H. S. R., operating experience with anthracite filters [for water supplies],

McCusker, P. A., and Kroeger, J. W., ethers of Δ^{γ} -butinen-a-ol, A., II, 84. and Vogt, R. R., preparation and reactions of a halogenoalkinenes, A., II,

McCutcheon, A. See Cuthbertson, D. P. McCutcheon, F. H., hamoglobin function during life history of the bullfrog, A., III, 194.

and Hall, F. G., hamoglobin in the

Amphibia, A., III, 450.

McDaniel, E. I., control of potato leafhopper (Empoasca fabæ) on dahlia with flour, tale, and infusorial earth, B., 712. McDermott, P. F., apparatus for measuring the total normal thermal emissivity of

sheet materials in the range 60-260°; A., I, 428.

McDermut, L. E., recovery of values from zinc spelter skimmings, (P.), B., 691. Macdonald, Adam D. See Code, C. F.,

and Haworth, E. Macdonald, Alexander D. See Boston

Blacking Co. McDonald, G. A., and Victor Chem. Works,

rust proofing composition and coating of iron and steel, (P.), B., 249. Macdonald, J. A., gas producers, (P.), B.,

207.

McDonald, J. C., effects of chemical combination on the K_{β} lines of 26 Fe-30 Zn, A., I, 2. Effects of chemical combination on X-ray emission spectra, A., I. 3.

MacDonald, J. E., tilting furnace, (P.), B.,

Macdonald, J. Y., temperature coefficient of thermal decomposition of silver oxalate, A., I, 191.

McDonald, L. E., and Petroleum Rectifying Co. of California, multiple-electrode [oil-emulsion] treater and method, (P.); B., 19. underfield of the A. Agong Hotel McDonald, R. D., and Norrish, R. G. W., photochemical reactions in the fluorite region. I. Photochemical decomposition

of ethylene, A., I, 193.

Macdonald, R. T. See Lewis, G. N.

MacDonald, W. T., selectivity modifier in non-sulphide [ore] flotation, B., 927.

See also Rose, E. H.

McDonnell, C. H. See Nesbit, R. M.

McDonnell, T. F. See Gardner, J. H.

MacDonough, J. V., and Little, Inc., A. D., urea-formaldehyde condensation process, (P.), B., 263. See also Buron, H. A.

McDorman, P., and Gen. Motors Corp., cleaning [of steel], (P.), B., 799.

MacDougall, F. H., molecular state of the vapour of acetic acid at low pressure at 25°, 30°, 35°, and 40°, A., I, 124. and Larson, W. D., solubility of silver

acetate in mixed solvents and the incomplete dissociation of ternary

electrolytes, A., I, 298.

McDowall, F. H., burette for formol titration, B., 971. Specifications of a burette for direct determination of casein in milk by the Walker method,

Dolby, R. M., and McDowell, A. K. R., milk coagulation with rennet; slowrenneting and softened milks, B., 488. Neutralisation of cream for buttermaking. IV. Effect of dilution with water on the titratable acidity of milk, B., 1261.

and McDowell, A. K. R., determination of casein [in milk] by formol titration after precipitation with acid, B., 80. Neutralisation of cream for buttermaking. I. Determination of p_H of cream, butter, and buttermilk. II. Estimation of titratable acidity of cream. III. Carbon dioxide content of milk and cream: effect of carbon dioxide on acidity, B., 971, 1261.

See also Dolby, R. M.
McDowell, A. K. R. See Dolby, R. M.,

and McDowall, F. H.

McDuffle, W. C. See Craig, W. A.

McEachern, T. H. Scc Levine, S. Z.

McElroy, O. See Hicks, V.

McElvain, S. M. See Beyerstedt, F.,

Roberts, D. C., and Roland, J. R.

McEwan, C., and McEwan, Ltd., J. & C., heat-insulating sheets, blocks, etc., (P.),

McEwan, Ltd., J. & C. See McEwan, C. McFadden, G. H., and McMurray, R. L., chemistry of berries of Rhus glabra, L., A., III, 161. [Constituents of] Rhus glabra, A., III, 446.

MacFadyen, D. E. See Kimball, R. H. McFarlan, R. L., Reddle, J. W., and Merrill, E. C., photo-electric method for measuring vitamin-A, A., III, 363.

MacFarlane, A. See Sinnatt, F. S. McFarlane, J. D. See Heat & Air Systems.

Macfarlane, M. G., and Robison, R., formation of a lavorotatory phosphoric ester from the Neuberg ester, A., II, 481.

McFarlane, W., new effect observed on passing electron beams through narrow

slits, A., I, 3. McFarlane, W. D., and Rudolph, L., evaluation of vitamin-A supplements by spectrometric methods, A., III, 404.

McGarrity, W. F. See Angle, J. E.
McGavack, J. See U.S. Rubber Products.
McGavock, W. C. See Eastman, E. D.

McGeary, F. M., navy department method of testing refractory linings for naval boilers, B., 1205.

McGee, F. R., dust catcher, (P.), B., 996. McGee, J. M. See Standard Oil Co. of Indiana.

McGee, L. C., blood-cholesterol in disturbances of basal metabolic rate, A., III,

McGeorge, M., choline-esterase activity in disease with special reference to myasthenia gravis, A., III, 89.

McGeorge, W. T. See Wharton, M. F. McGhee, H. W. See Leatherock, L. E. McGill, R. See Du Pont de Nemours &

MacGillavry, C. H., and Bijvoet, J. M., crystal structure of cadmium and mercury diammino-dihalides, A., I, 17. Crystal structure of Zn(NH₃)₂Cl₂ and

Zn(NH₃)₂Br₂, A., I, 118. MacGillavry, D., theory of diffusion in fast streaming vapours, A., I, 232. Separation of isotopes by diffusion in fast streaming mercury vapour, A., I. 319.

and Rideal, E. K., theory of limiting currents. I. Polarographic limiting currents, A., I, 620.

McGillivray, J. See Lauder, A.

McGinty, D. A., and McCullough, N. B., thyrotropic hormone in non-pituitary tissue, A., III, 101.

See also Marker, R. E., and Pratt, J. P. McGohan, G. W. See Canfield, J. J.

McGookin, A., Reed, F. P., and Robertson, A., rottlerin. I., A., II, 300.

McGovern, E. W., drying methyl chloride, B., 414.

McGovern, J. N., effect of high sulphur dioxide concentrations and high pressures in sulphite pulping, B., 26.

McGovran, E. R., impregnated oils as codling moth insecticides, B., 714.

and Farrar, M. D., determination of spray injury to growing plants under laboratory conditions: fog chamber, B., 711.

McGowan, G. K., pyruvate oxidation in brain. II. Oxygen: pyruvate ratio and respiratory quotient, A., III,

and Peters, R. A., pyruvate oxidation in brain. III. Nature, specificity, and course of oxidation catalysed by vitamin B_1 , A., III, 386.

McGowan, J. C. See Baker, W.

McGowan, J. M., Bollman, J. L., and Mann, F. C., bile acids in icterus produced by tolylenediamine, A., III, 59.

McGraghan, L., optical activity of preparations of squills, B., 618, 1131. See also Jinkings, A.J.

McGreal, M. E. See Niederl, J. B. Macgregor, C. W., relations between stress and reduction in area for tensile tests of metals, B., 793. McGregor, G. H., Kelly, W. N., and Heuer,

H. R., unbleached sulphite pulp from Western hemlock, B., 331.

MacGregor, J. R., Diesel fuels, B., 109. Effect of air humidity on octane number determinations [of motor fuels], B., 641. McGregor, R. R., Tillotson, E. W., and

Macbeth-Evans Glass Co., purification of glass sand, (P.), B., 346.

MacGregor, T. N. See Jones, M. S. McGregor, W. G., inheritance of quality and quantity of oil in flax in relation to other plant characters, B., 1365.

McGrew, F. C., and Adams, R., stereochemistry of deuterium compounds of the type RR'CXHXD: ethyl-d4-ethyl-

carbinol, A., II, 396.
McGrew, R. V. See Marker, R. E.

McGrue, W. M., refractory concretes for coke ovens and furnaces, B., 1208. McHargue, J. S., iodine and bromine [in

milk], A., III, 457. [Determination of] less common elements [iodine] in soil, B., 954.

See also Calfee, R. K.

Machatschki, F., artificial inorganic fibre, A., I, 16. Crystal structure of quartz and aluminium orthoarsenate, A., I, 17. Grigoriev's synthetic phlogopite, A., I, 384. Crystal structure of lowtemperature quartz, A., I, 400. Thortveitite and magnesium pyrophosphate, A., I, 434.

and Moser, A., preparation of crystalline aluminium ortho-arsenate, A., I, 93.

MacHattie, I. J. W., and Machonachie, J. E., determination of small quantities of oxygen in gases and liquids, A., I,

Mache, H., evaporation coefficient of water and two methods for its determination, A., I, 607.

Machebouf, M. A., and Januszkiewicz, M., lipoproteins of blood-serum; nature of constituent proteins, A., III, 290.

Lévy, G., and Faure, M., chemical nature of the hapten-lipoid stabiliser of tubercle bacilli; chemistry of the purified active fraction, A., III, 398. See also Basset, J., and Giroud, A.

Machen, C. See Brit. Coal Distillation. McHenry, E. W., vitamin-B₁ and fatty livers, A., III, 364. Effect of choline on vitamin- B_1 -sparing action of fats, A., III, 439. Vitamin- B_1 and synthesis of fat from carbohydrate, A., III, 439.

See also Best, C. H.

Machida, K. Seo Yamamoto, Kenichi.

Machin, J. S. See Young, T. F.

Machle, W. F., normal urinary fluorine
excretion; mottled enamel, A., III, 10.

Machlis, S., and Blanchard, K. C., rôle of glutathione in the metabolism of yeast, Ă., III, 483.

Machonachie, J. E. See MacHattie, I.J.W.

Machu, W., theory of [pickling] inhibitors [for iron], B., 682. Theories of inhibition; explanation of action of inhibitors in acid corrosion of metals, B., 920. Theory of corrosion inhibitors and a method for evaluating them, B.,

McIlwain, H., phenazine series. V. Reactions of 1:2:3:4-tetrahydrophenazine and related compounds. VI. Reactions of alkyl phenazonium salts; the phenazyls, A., II, 521.

See also Clemo, G. R. McInerney, T.J. See Sharp, P.F. MacInnes, A.S. See Marshall, M.J.

MacInnes, D. A., interionie attraction theory of electrolysis, A., I, 461.

and Longsworth, L. G., measurement and control of p_H with the glass electrode, A., I, 266.

See also Longsworth, L. G., and Shedlovsky, T.

MacIntire, W. H., Hardin, L. J., and Oldham, F. D., calcium metaphosphate fertilisers, B., 955. MacIntire, W. H., Hardin, L. J., Oldham, F. D., and Hammond, J. W., development of phosphate insolubility in phosphatic mixtures, B., 1044.

Shaw, \hat{W} . M., Young, J. B., and Robinson, B., effects of twelve-year residues of lime and magnesia on outgo of subsequent additions of potassium, B., 164.

See also Shaw, W. M.

MacIntosh, A. B., Rait, J. R., and Hay, R., binary system FeO-Al₂O₃, A., I, 242.

See also Hay, R. McIntosh, I. G. See Grimmett, R. E. R. McIntosh, James, and Carnegie Steel Co., coke oven, (P.), B., 1158.

McIntosh, James (Reading), and Selbie, F. R., measurement of the size of viruses by high-speed centrifugalisation, A., III, 276.

Macintyre, M. See Cunningham, B. McIntyre, P. J., bright annealer, (P.), B.,

Maciuc, G., similar behaviour of negative glow in glow discharges to cathodic current source in arc discharge, A., I, 540.

McJuukin, F. A., and Henry, J. W., antigrowth effect of lipin fractions of tissue extracts, A., III, 24. Mack, C. O. See Hurd, C. D.

Mack, E., jun., molecular structure and van der Waals forces, A., I, 223. See also Helm, D. F.

Mack, G. L., and Tressler, D. K., vitamin-G in vegetables. VI. Determination of ascorbic acid by Tillmans' method, A., III, 283.

See also Kertesz, Z. I., and Tressler,

Mack, J. E., and Laporte, O., asymmetric Zeeman effect patterns in a complex spectrum, A., I, 208.

Mack, M. J., fruit ice creams, B., 972. See also Mueller, W. S.

Mack, R. T. See Edelman, P. E. Mack, W. B., and Brasher, E. P., influence of commercial fertilisers, potassium iodide, and soil acidity on iodine content of vegetables, B., 378.

Mackay, C. O. See Carrier, W. H. Mackay, C. W. See Slagter, A. J.

McKay, E. M., and Barnes, R. H., ketosis following administration of adrenal cortex extract, A., III, 101. Effect of adrenalectomy on ketosis of fasting and on action of anterior pituitary kctogenic principle, A., III, 400. Effect of adrenalectomy on liver-fat in fasting and after administration of anterior pituitary extracts, A., III, 400.

and Butler, A. M., sodium and potassium metabolism; effect of potassium on sodium and water balances in normal subjects and patients with Bright's

disease, A., III, 204. and Schroeder, C. R., virucidal (rabies and poliomyelitis) activity of aqueous urea solutions, A., III, 100.

See also Keeney, E. L.

McKay, F. M. See Levine, V. E. MacKay, G. J., [precious metal] ore extraction, (P.), B., 457.

McKay, H., and Patton, M. B., basal metabolism of older women, A., III, 302. Basal metabolism of women over 35 years of age, A., III, 380.

McKay, H. A. C., exchange reactions of iodine compounds, A., I, 259. See also Craxford, S. R.

Mackay, H. M. M., early anamia of premature infants: hæmoglobin level of immature babies in first half-year, and effect during first three months of blood injections and iron therapy, A., III. 11.

and Jacob, L. E., stable ferrous sulphate mixture for the treatment of nutritional anæmia in young children, A., III, 378.

Mackay, J. G., and Avons, C. H., determination of total selenium in rubber,

MacKay, M. E. See Hicks, C. S.

McKay, R., potassium permanganate as an aid to production of asexual fructification by Phytophthora erythroseptica, Pethybr., A., III, 272. McKay, R. E. See Zumstein, R. V.

McKay, R. J., nickel and corrosion-resisting nickel alloys, B., 575.

McKee, H. S., review of recent work on nitrogen metabolism of plants, A., III,

McKee, J., aluminium stearate grease quality depends on exact manufacturing control, B., 942.

McKee, R. H., purification of carbon dioxide, (P.), B., 910.

and Morse, E. H., cellulose acetate, (P.), B., 1191.

McKeehan, L. W., ferromagnetic anisotropy in nickel-cobalt-iron crystals at various temperatures, A., I, 120. Magnetic interaction and resultant anisotropy in unstrained ferromagnetic crystals, A., I, 503.

See also Bozorth, R. M., and Elmore, W. C.

McKellar, A. See Jenkins, F. A. Mackenna, F. S., bee venom in rheumatic disorders, A., III, 59.

McKenna, J. F., and Sowa, F. J., organic reactions with boron fluoride. XIII. Alkylation of benzene with alcohols. XV. Alkylation of benzene with esters, A., II, 181, 371.

McKenna, P. M., and Vanadium-Alloys Steel Corp., composition [sintered alloy] for steel-cutting tools, drawing dies, etc. (P.), B., 53. Hard composition [sintered alloy], (P.), B., 934.

McKenzie, A., and Ritchie, A., optically active methyl- and ethyl-benzoins, A., II, 104.

See also Abbott, E.B., and Boyle, J.S.W.Mackenzie, A. S., and Abilene Cotton Oil Co., apparatus for separating and clean-

ing material, (P.), B., 993.

McKenzie, B. F. See Mason, H. L.

Mackenzie, C. A. See Buehler, C. A.

Mackenzie, C. M. See Container Corp. of

America. MacKenzie, D. W., jun. See Alley, A. McKenzie, F. B., vitamin-D developments, A., III, 283.

McKenzie, F. F., and Nahm, L. J., cytology of the adrenal, A., III, 399. See also Nahm, L. J.

Mackenzie, F. H., and Amer. Chem. Paint Co., chemical cleaning process, (P.), B., 1236.

McKenzie, H. L., life history and control of latania scale on avocado, B., 1390. McKenzie, H. M. - See Edge, S. R. H.

Mackenzie, J. D., economic exploitation of South African torbanite, B., 999.

McKenzie, J. P. Seo Bruckmann, K. McKenzie, J. T., and Clark, M. M., marking of roads, (P.), B., 678.

Mackenzie, L. B. See Eisenman, A. J. McKeon, J. J., and Railway Service & Supply Corp., reclamation of [journalbox | oil waste, (P.), B., 1166. McKeown, A. See Griffith, R.O.

McKeown, J., creep of lead and lead alloys. I. Creep of virgin lead, B., 354.

and Hudson, O. F., stress-strain characteristics of copper, silver, and gold, B., 353.

McKesson & Robbins, Inc. See Fanto, E. C.

McKhann, C. F., Green, A. A., Eckles, L. E., and Davies, J. A. B., immunological applications of placenta extracts: oral administration, A., III, 251. McKibben, J. L. See Herb, R. G.

McKibbin, R. R. See Sallans, H. R. McKie, D. See Partington, J. R. Mackijani, J. K. See Dutta, M. C.

McKinley, J. B. See Stearns, G.

McKinney, D. S., Leberknight, C. E., and Warner, J. C., infra-red absorption of liquid and gaseous 1:4-dioxan between 1 4 and 14 0 μ, A., I, 218.

Mackinney, G., carotenoids of the peach, A., III, 245.

MacKinney, H. W. See Sallans, H. R. McKinney, R. S., and Jamieson, G. S., non-fatty oil [liquid wax] from Jojoba seed, B., 58. Japanese tung oil, B., 940.

Jamieson, G. S., and Holton, W. B., sovabean phosphatides, B., 838. Sce also Jamieson, G. S.

McKinnon, L. R. See Allen, F. W.

McKinnon & Co., Ltd., W., and Carnie, J., machines for extruding [and coating] premier jus, suet, fat, and similar stuff, (P.), B., 1083.

McKinstry, H. E., geology of silver deposit at Colquijirca, Peru, A., I, 102.

Mackintosh, D. L. See McCampbell, C. W. Mackintosh, J., dairy farming and dairy work, B., 838.

Sco also Campion, J. E.

McKittrick, E. J., basal metabolism of
Wyoming University women, A., III, 258. Mackler, A. I., [kinematograph] film treatment, (P.), B., 1410.

McLachlan, C. G., increasing gold recovery

from Noranda's milling ore, B., 49.

MacLaren, F. H. See Standard Oil Co. McLaren, J. See Groggins, P. H.McLaughlin, D. B., lines of neutral oxygen

and carbon in spectra of novæ, A., I, 103. McLaughlin, G.D. See Cameron, D.H.McLaughlin, L. See Western Electric Co. Maclaurin, J., decalcomania paper, (P.),

B., 1324. McLay, A. B. See Crawford, M. F. MacLean, D.L. See Best, C.H. Maclean, I.S. See McAnally, R.A.

McLean, J., and Wilson, F. J., thiazole and thiadiazine formation from thiosemi-

carbazones, A., II, 264.

Maclean, M. E., colour toning of photographic prints, B., 623.

McLean, R. See Aub, J. C., and Friedgood, H. B.

McLean, R. C., and Hughes, W. L., distribution of boron in Vicia faba and Gossypium herbaceum, A., III, 160.

McLearn, F. H. See Fraser, \overline{F} . J. McLeish, (Miss) N., and Campbell, N., structure of naphthalene, hydrindene, and tetralin derivatives, A., II, 406.

McLellan, R. D. See Betterton, J. O. MacLenathen, E. See Lilienfeld, A., and Wright, I. S. Jan Mark Ger

MacLeod, C. M. See Dubos, R., and Horsfall, F. L., jun.

Macleod, D. B., compressibility of liquids and a method of obtaining the compressibility of molecules, A., I, 355.

MacLeod, G. See Vahlteich, E. M. MacLeod, G. F., and Dickison, W., Bordeaux spraying in relation to growth rate and yield of potatoes in Nassau County, Long Island, B., 72.

Macleod, J., and Ponder, E., solvent water in the mammalian crythrocyte, A., III, 109.

See also Ponder, E.

McLeod, L. M., liquid filters, (P.), B., 401.

McLeod, M. See Buttle, G. A. II.
McLeod, W. W., chemical properties of modern road materials, B., 556.

McLoon, N. E., lime kiln, (P.), B., 342.
McLuckie, C. See Naylor, Ltd., J. H.
McMahon, J. F. See Schurecht, H. G.
McMahon, P. R., and Speakman, J. B.,

action of light on wool. I. Titration curves of intact and exposed wools, B., 890.

McManus, W. F. See Humoller, F. L. McMaster, N. B., "flat-sour" spoilage in canned peas, B., 492.

McMeekin, T. L., Cohn, E. J., and Weare, J. H., physical chemistry of aminoacids, peptides, and related substances. VII. Comparison of solubility of amino-acids, peptides, and their derivatives, A., I, 24.

See also Cohn, E. J. McMichael, J. See Marais, O. A. S. MacMillan, D. P. See Pierce, W. C. McMillan, E., artificial radioactivity of very

long life. A., I, 545. Kamen, M., and Ruben, S., neutroninduced radioactivity of the noble

metals, A., I, 545. McMillen, J. H., and Scott, G. H., interrupted are for spectral analyses, A., I, 331. Magnetic electron microscope, A., I. 536. Lead in human blood, A., III. 166.

Sec also Scott, G. II.

McMullan, E. W., and Gasoline Antioxidant Co., [stabilising] treatment of hydrocarbons, (P.), B., 114.

MacMullin, R. B., and Mathieson Alkali Works, Inc., chemical manufacture; [calcination], (P.), B., 629. Magnesium oxide and chloride, (P.), B., 908.

See also Cunningham, G. L. McMurdie, H. F., portion of system CaO-

Al₂O₃-Fe₂O₃, A., I, 308. McMurray, R. L. See McFadden, G. H. McMurric, D. H. See Richter, G. A. McNab, J. See Kharasch, M. S.

Macnab, W., chemical engineering in explosives manufacture, B., 91.

McNabb, W. M. See Pomerantz, A., and Rubin, N.

McNair, H., mould facings for east iron and their effects on vitreous enamel, B., 1211.

McNair, J. B., sequence and climatic

distribution of some plant acids, A., III,

McNally, J. G. See Eastman Kodak Co. McNally, W. D., and Bergman, W. L.,

silicosis, A., III, 207.

McNamara, E. P. See Taylor, N. W.

McNamara, E. W. See Tweedy, W. R. McNamee, P. D. See Butterfield, C. T.

McNamec, R. W. See Carbide & Carbon Chem. Corp., and Hurd, C. D.
McNary, R. R. Sec Cholak, J.
McNatt, E. M. See Bruce, W. A.

McNanght, K. J., cobalt content of limonites used in treatment of bush sickness, A., III, 204.

See also Robertson, P. W.

Macnaughtan, D. J., growth of electro-plating industry, B., 146. Differences between the structure of electro-deposited and hot-dipped metal coatings, B., 1359.

and Prytherch, J. C., tinning of steel strip by electrodeposition. II. Effect of deformation on protective value of hot-dipped and electrodeposited tin coatings on steel, B., 920.

Tait, W. H., and Baier, S., tinning of steel strip by electrodeposition. I. Electrodeposition and polishing thin coatings of tin on steel, B., 920.

See also Daniels, E.J., and Kerr, R. Macnaughton, A. I., maturing of paper, B., 894.

McNeil, A., dyestuffs in printing ink manufacture, B., 157.

McNeil, C., vacuum pans for boiling sugar, etc., (P.), B., 381. Vacuum pans, (P.), B., 631.

McNeil, C. P. See Standard Oil Co., and Standard Oil Co. of Indiana.

McNeil, E. See Kofoid, C. A.

MacNeille, S. N. See Gilfillan, E. S., jun. MacNevin, W., micro-centrifuge, A., I,

MacNevin, W. M. See Kolthoff, I. M. McNish, A. G. Sec Wait, G. R. MacNulty, B. J. Sec Hughes, E. D. McNulty, G. M. Sec Standard Oil Co. Macormac, A. R., and Cameron, F. K., pulps from the whole cotton plant;

comparison of soda and nitrie acid pulps, B., 226. Macovski, E., and Ramontianu, E.,

syntheses in the homoneurine series. IV. Bromo-derivatives of pyridine homoneurine, A., II, 165.

See also Candea, C. McPhail, M. K., response of uterus of immature rabbits to cestrone, A., III,

MacPherran, R. S., cupola high-test cast iron, B., 1348.

McPherson, A. T. See Holt, W. L. MacPherson, D. R., and Forbrich, L. R., determination of uncombined lime in Portland cement; ethylene glycol method, B., 1343.

McPherson, W. K., and Christensen, L. M., reaction of alcohol-gasoline blends to the doctor test, B., 1298.

McQuaid, H. W., effect of aluminium addition on structure of a quenched carbon steel, B., 1216.

and Timken-Detroit Axle Co., heatapparatus [for metal articles], (P.), B., 147.

McQuarrie, D. See Duncan, J. R. M.

McQuerrie, I. See Stoesser, A. V. McQueen, R. G. See Dunlop, Ltd., See Dunlop, Ltd., W. & J. McQueen, S. T. See Imperial Chem. Industries.

McQuillin, F. J. See Adamson, P. S., and Du Feu, E. C.

McQuiston, T. A. C., fatal poisoning by sodium nitrite, A., III, 66.

MacRae, D. F., soda-pulp, B., 26. McRae, D. R. See Langstroth, G. O. McRae, J. A., Conn, W. C., and Platt, K. J., substituted succinic acids. II. Conversion of ad diarylsuccinamides into diarylacetic acids, A., II, 245 Macrae, T. F. See Edgar, C. E. 101 to

Macrez, C. See Clerc, A. McShan, W. H., and French, H. E., chemistry of lactogenic hormone extracts, A., III, 103.

the lactogenic hormone, A., III, 42.

McSwiney, B. A. See Harrison, J. S.

Maculla, E. See Graff, S.

McVay, T. N., bibliography of ceramic microscopy, B., 345.
and Parmelee, C. W., effect of iron and

its compounds on the colour and properties of ceramic engobes and materials, B., 1340.

McVicar, G. A. See Cleghorn, R. A. McVoy, V. P., water reclaimer, (P.), B., 94. MacWalter, R. J. See Anderson, E. B. McWhorter, F. P., latent virus of lily, A.,

Macy, I. G. See Cooley, T. B., Erickson, B. N., Hnmmel, F. G., and Williams,

Macy, P., mineral nutrient requirements of

plants, A., III, 236.

Madar, K. V., influence of sodium-containing irrigating water on soil properties, B., 954

Madden, R. J. See Elvehjem, C. A. Maddock, W. E., supporting and placing Maddock, W. E., supporting and placing of pottery and other goods during firing processes, (P.), B., 914.

Maddock, W. G. See Pedersen, S.

Maddocks, C. B. See Distillers Co.

Madelung, W., and Oberwegner, M. E.,

3. and 6-membered cyclic oxido-com-

pounds. II., A., II, 69.

Madenwald, F. A., Beno, N. J., and
Continental Can Co., scaling composition,

(P.), B., 469. Mader, E. O., and Blodgett, F. M., potato spraying and potato scab, B., 171. Response of different varieties of potatoes to different amounts of copper in a modified spray programme, B., 1386.

and Mader, M. T., composition of tubers of sprayed and unsprayed potato plants in relation to cooking quality, В., 1263.

and Udey, E. C., blooming of potatoes as influenced by pyrethrum dust, B., \$22.

See also Blodgett, F. M. Mader, M. T. See Mader, E. O. Madgin, W. M. See Burnham, W. R.

Madinaveitia, J., alkaloids from Arundo donax, L., A., II, 125.

Madis, W. See Szebellédy, L.

Madison, F. W. See Squier, T. L.

Madison, R. R., and Taranik, J. D., dynamics of fibrinolysin production by streptococci, A., III, 275, and a

Madono, O., equilibria in carburising of

iron by gases, B., 789.

Madsen, C. B., radioactive isotopes of nickel and copper, A., I, 5. Ionio mobility of gaseous ions in carbon

dioxide at high pressures, A., I, 209.

Madsen, C. J. T., preparation of senega fluid extract, B., 1131.

See also Dalsgaard, A. T., and Schou,

Madsen, L. A., coating preparations for preventing formation of mould, (P.),

Madsen, L. L., comparative effects of codliver oil, cod-liver oil concentrate, lard, and cottonseed oil in a synthetic diet on development of nutritional muscular dystrophy, A., III, 259, 2013 of the or Madsen, P., apparatus for bringing liquids and gases or vapours into intimate contact, (P.), B., 995.

Madshagaladze, K. L., determination of aluminium in nitrate solution by potentiometric titration with an antimony electrode, A., I, 477.

Madson, B. A. See Ball, W. S. Mächler, W., influence of pressure and temperature on recombination coefficient and ionisation by y-rays in air and carbon dioxide, A., I, 58.

Maecker, H. See Lochte-Holtgreven, W.

Maeda, G. See Ishikawa, S.

Maeda, $M_{\cdot,\cdot}$ influence of purine derivatives on growth and morphological picture of cultures of fibroblast in vitro, A., III, 26. Influence of boric acid and borax on growth of fibroblast and epithelial cultures: morphological changes following administration of these drugs, A., III, 264. Maeda, S., chemical nature of papain, A., Ill, 393.

See also Akabori, S.

Mäder, H. See Jenckel, E.

Machara, K., hypoglycæmie substances in various organs other than the pancreas. I. Salivary glands, liver, and parenchymatous organs. II. Mucosa of the digestive tract. III. Effects of these substances on action of adrenaline and insulin on blood-sugar. IV. Physical and chemical properties of the substances: similarity to those of insulin and yeast extraot, A., III, 41. wedness

Maercks, $J_{\cdot,\cdot}$ use of tar from bituminous coal and tar-oil mixtures in a highspeed Diesel engine, B., 203.

Maertens, F., [bath for] depositing zinc electrolytically, (P.), B., 459.

Maess, L., and Müffling, L. von, vapour pressures of some hydrocarbons and ketones, A., I, 557. Magaldi, F. See Ubaldini, I.

Magall Akt.-Ges., production of magnesium and alkaline-earth metals by electrolysis of fused starting materials, (P.), B., 148. Magall Akt.-Ges., Zürich, dehydration of

magnesium chloride, (P.), B., 135.

Magaram, E. E., properties of soil at differ-

ent degrees of unsaturation in relation to the effects of calcium, B., 595.

Magaram, K. K. See Terentiev, A. P.

Magarschak, G. K., influence of magnesia

additions on solubility of calcium aluminate slags, B., 435. Proper composition of the charge in the smelting of calcium aluminate slags, B., 1044.

Magat, M., Raman spectra and constitution of liquids, A., I, 112.

See also Bauer, E., Bernamont, J., and Moureu, H.

Magath, T., and Hurn, M., anticoagulants, A., III, 453.

Magaton, S., smoke and dust-absorbing apparatus, (P.), B., 635.

Mager, A. See Felix, K.

Magerl, J., reactions of hæmolysins on immunisation with blood mixtures, A., III, 373.

Maggs, J. See Garner, W. E. A. Aller

Magheru, A. See Magheru, G. Be raped Wood Magheru, G., Magheru, A., and Barbulescu, E., toxicity of mixtures of B. coli toxins and antisera, A., III, 250. Spontaneous agglutination of B. coli, A., III, 275.

Magheru, A., and Creanga, H., preparation of antiserum for B. coli, A., III, Magidova, S. S., Divinskája, E. K., Andreeva, E. F., and Ivaschkevitsch, K. D., determination of carbon disulphide, B., 1016.

Magidson, O. J., preparation of 8-hydroxy-quinoline, A., II, 431.

Grigorovski, A. M., Maximov, V. I., and Margolina, R. S., synthesis of acriquine (8-chloro-5-δ-diethylamino-amethylbutylamino - 3 - methoxyacridine), A., II, 350.

and Travin, A. I., medicinal products from acridine compounds. III. Tetrahydro-derivatives, A., II, 306.

Magie, R. O., and Horsfall, J. G., relative adherence of cuprous oxide and other copper fungicides, B., 1107.

See also Keitt, G. W. Magill, M. A., Steiger, R. E., and Allen, A. J., amino-acids, acylamino-acids, dipeptides, acyldipeptides, and derivatives of these compounds. I. Adsorption spectra, A., I, 111.

See also Allen, A. J.

Magill, P. La F. See Du Pont de Nemours

& Co., E. I.
Magill, T. P. See Francis, T., jun.
Magnan, C. See Bierry, H.

Magnani, M., production of stable solutions of colloidal silver by means of an electric arc, using alternating current, B., 247. Magnavox Co. See Lilienfeld, J. E.

Magne, H., and Rémy, P., toxic action of substances which give rise to hydrochloric acid on hydrolysis, A., III, 395. and Trimbach, H., hemolysis by various substances which liberate hydrochloric acid, A., III, 373.

Magnesium Castings & Products, Ltd.

See Day, L. G.

Magnesium Development Corporation. See Paine, R. E.

Magnesium Electron, Ltd. See I. G. Farbenind.

Magnesium Products, Inc. See Kemmer,

Magno-Werk, [removal of carbon dioxide from water by] the Magno process, B.,

Magnusson, N. H., evolution of the Lower Archæan rocks in Central Sweden and their iron, manganese, and sulphide ores, A., I, 102.

Magoffin, J. E. See Bancroft, W. D. Magoun, G. L., Tompkins, D. H., and Monsanto Chem. Co., thiourea derivatives; inhibitor[s] for pickling of metals, (P.),

Magraw, D. A., Copeland, L. E., and Sievert, C. W., determination of lactose in mixed feed, B., 284.

Maguire, J. F., arc-welding of monel metal, B., 1353.

Mahadevan, C. See Mukherjee, S. K. Mahal, H.S., antiseptics and anthelminities. III. Pharmacology of certain flavones with special reference to their anthelmintic action, A., III, 349.

Mahaux, J., specific dynamic action of proteins and pituitary functions, A., III, 38. Thyrotropic hormone and specific dynamic action of proteins, A., III, 101. Effect of thyrotropic hormone and successive administration of thyroxine and thyrotropic hormone on the meta-

bolism of the guinea-pig, A., III, 323.

Mahdihassan, S. See Feulgen, R.

Maheshwari, G. I., and Jha, J. B., potentiometric determination of lead with sulphide solutions, A., I, 328.

Mahieu, J., theory of concentrated solutions. XIV. Solubilities in mixtures of two miscible solvents, A., I, 75.

Mahin, E. G., and Hamilton, J. W., endurance limit of black-heart malleable iron, B., 445.

Mahin, W. E., and Hamilton, J. W., [metallographic proposed standardsystem of] classification of the graphite [phase] in grey cast iron, B., 1211.

Mahl, H., field emission from film-covered cathodes; aluminium-aluminium oxide-cæsium oxide, A., I, 437. See also Brüche, E.

Mahler, G. T. See Bunce, E. H. Mahlerwein, H. See Wieland, H. Mahlie, W. S. See Faber, H. A.

Mahmoud, A., phosphoric acid supply in soils of the Batim permanent experiments, B., 1383. Phosphatic fertilisers: comparative trials on immediate and residual effects, B., 1384.

Mahorner, H. R. See Ochsner, A. Mahr, C., and Ohle, Hertha, thiocarbamide in quantitative analysis. I. Determination of cadmium and separation of cadmium from zinc, A., I, 376.

Mahr, I. See Annau, E.

Maidanovskaja, L. G., adsorption of hydrogen on silica gel and glass, A., 1, 561.

Maier, C. G., sponge-iron experiments at Mococo, B., 788.

and Mountain Copper Co., hot reducing gases, (P.), B., 755.

Maier, I. See Wilson, G. S.

Maier, K. See Brockmann, H. Maier, M., hard soldering of light metals in the electric furnace, B., 355.

Maier, W. See Schmidt, E. W. Maier-Leibnitz, H. See Bothe, W.

Mail, G. A., accuracy of a soil thermograph. B., 376.

Mailander, R., internal stresses and endurance strength of nitrided steels, B., 446.

and Ruttmann, W., influence of preliminary time of heating and loading on results of creep tests. B., 921.

Maillard, A., deuterium content of hydrocarbons of light petroleum from different sources, A., II, 1. Hydrogenation of naphthalene, B., 522.

Acker, A., and Rengade, F., ageing of lubricating oils in internal-combustion engines, B., 316.

and Edelberg, W., mechanism of formation of engine carbon in internalcombustion engines, B., 642. 1

Maille de Girvès, J., fat of grape marc, B., 937.:

Maimin, R. See Frankel, M.

Main, R. J., alterations of alveolar carbon dioxide in man accompanying postural

change, A., III, 369.

Main, S. A. See Hadfield, (Sir) R.

Mainstone, P. A., tribo-electric properties of a quartz-nickel interface between 120° and -78°, A., I, 227. Effect of heat-treatment on tribo-electric properties of quartz and of metals, A. I. 227.

Mainzer, F., d-glutamic acid as a salt ssubstitute. III., A., III, 304. sales and Mainzhausen, L. See Köhn, M_{*} , M_{*}

Maione, A., infra-red absorption of hydrogen peroxide, A., I. 9. Influence of molecule association on infra-red absorption, A., I, 218.

Mair, B. J., and Schicktanz, S. T., lubricating oil fractions; acetone extraction of constant-boiling fractions, B., 110. Extraction with acetone of substantially constant-boiling fractions of a "water-white" lubricating oil, B., 316.

and Willingham, C. B., comparison of lubricating oil fractions with synthetic hydrocarbons; physical properties and chemical constitution, B., 110. Relationships between physical properties and chemical constitution of Inbricating oil fractions, B., 314.

Maisner, H. See Olsen, J. C.
Maitland, P. See France, H.
Maitra, A. T., semi-optical lines in X-ray spectra, A., I, 387. See also Prosad, K.

Maitra, N. M. See Pandit, C. G. Maiuri, G., liquid air, and oxygen therefrom, and liquefaction and separation of other gases, (P.), B., 544.

Maiwald, K., and Siegel, O., storage and action of stall manure. II. Decomposition processes in the Württemburg and other processes, B., 1385.

Maiweg, L. See Sevag, M. G.

Maizels, M., permeation of human erythrocytes by anions and cations, A., III, 369.

and Paterson, J. L. H., base binding in erythrocytes, A., III, 369.

Majer, F., concentration of [sucrose] solutions in conductometric ash determinations, B., 717.

Majer, V., chemical concentration of the radioactive gold isotope, A., I, 319. Polarographic studies with the dropping mercury cathode. LXXI Changes of polarisation when using small anodes, A., I, 567. Exchange of charge between thallous and thallic ions, A., I, 411. Rapid determination of total alkalis in ceramic materials, B., 549.

Majert, H. See Meerwein, H.

Majid, S. A. See Sinton, J. A. Majima, A. See Kariyone, T.

Majima, R., and Tamura, K., Aconitum alkaloids. XI. Constitution of Aconitum alkaloids, A., II, 38.

Major, G. See Cruickshank, Ltd., R. Major, R. H., cases of high blood-sugar

without glycosuria, A., III, 3.
Major, R. T., Cline, J. K., and Merck & Co., β-methylcholine derivatives and salts, (P.), B., 620, 730. Salts of β -alkylated choline alkyl ethers, (P.), B., 1134.

and Cook, E. W., preparation and properties of xyloseen-(1:2)tribenzoate, A., II, 6. Preparation and properties of penta - acetyl - a - keto-d-glucoheptonic acid, A., II, 49. Acetyl derivatives of gluconic and xylonic acids, A., II, 49.

See also Cook, E. W., and Folkers, K. Majorana, E., symmetrical theory of the electron and of the positron, A., I, 493.

Majorana, Q., metallic photo-resistance, A., I, 221. Effect of light on thin metallic layers, A., I, 498.

Majorova, E.J. See Isgarischev, N.A.Majrich, A., hydrodynamic theory of detonation, B., 190.

Majumdar, B. N. See Ahmad, B., and Wilson, H. E. C.

Majnmdar, D. See Ray, Susil K.
Makareva, S., diffusion of electrolytic hydrogen through metallic palladium, A., I, 24.

Makarov, A. V., and Plastinin, I. V., determination of thermoelectric homogeneity of a platinum wire, B., 52.

Makarov, E. S., and Tarschisch, L., X-ray investigation of the system aluminiumberyllium, A., I, 607.

Makarov, P., protozoa in relation to narcosis, A., III, 34.

Makarov, S. Z., and Krasnikov, S. N., physico-chemical equilibria in the carbonation of aqueous sodium sulphide at 25°, A., I, 518.

Makarov-Semljanski, J., preparation of methylethylaniline, A., II, 334.

and Bibischev, V. P., nitration of tetrahydronaphthalene, A., II, 373.

and Prokin, S. [with Ivanova, V., and Ivanov, B.], preparation of benzaldehyde from benzylidene chloride and boric acid, A., II, 102.

Makarova, L. G., reaction of organic bismuth compounds with mercuric chloride,

A., II, 220. Makarova, P. T. See Fomin, S. V.

Makarova, T. A. See Malkin, S. I. Makarova-Semljanskaja, N. N. See Schorigin, P.

Maker, F. L. See Standard Oil Co. of California.

Maki, T., and Nagai, Y., regularities of substitution in polynuclear vat dyes. I. Constitution of a dichloroisoviolanthrone and preparation of some Bz-2:Bz-3'-isoviolanthrone derivatives. II. Dinitro- and diamino-isoviolanthrones of the Bz-2:Bz-2'-series, A., II, 460.

and Yokote, M., vat dyes of the flavanthrone series. I. Preparation of pure flavanthrone. II. Molecular compounds with nitrobenzene, antimony pentachloride, and 2-aminoanthraquin-

one, B., 221.

Makino, H., action of trihydroxysterocholenic acid on pancreatic lipase and on blood corpuscles, A., III, 476.

Makinson, $R. \hat{E}. B.$ See Bailey, J. E.Makishima, S., theoretical studies of the electrode potential. II. Theoretical estimation of standard potentials, A., I, 32. Makkus, W., and Hundhammer, W., man-

uring with calcium cyanamide and risk of injury to grazing animals, B., 390. Maksimova, M. See Bruns, B.

Malachowski, R., condensation of diacetvltartarie anhydride with aromatic amines, A., II, 176.

Jurkiewicz, L., and Wojtowicz, J., carbonyl cyanide. I., A., II, 282.

Malaeva, B., use of nickel formate catalyst at the Voroneshsk hydrogenation works, B., 366.

Malam, J. E. See Imperial Chem. Industries.

Malan, A. I. See Du Toit, P. J.

Malaprade, L., existence of crystalline cupriperiodates, A., I, 319. Acidimetric determination of glycerol (and erythritol) by periodates, A., II, 271.

Malarski, T., influence of electrolytes on electrification of water by atomisation, A., I, 139.

See Cambi, L., and Szegö, L. Malatesta, L.

Malatray, H. See Lambret, O. Malcolm, W. L., digestion of ground garbage, B., 848.

Malcov, M., steel, B., 678. $\begin{array}{ll} \operatorname{Malczynski}, \, S. & \operatorname{See \, Jalowy}, \, B. \\ \operatorname{Malden}, \, J. \, \, W. & \operatorname{See \, Schidrowitz}, \, P. \end{array}$ Male, C. T., jun. See Luhr, O.

Malec, E. See Beck, W.

Malek, I., biological properties of Bacterium typhi flavum, A., III, 71. Polysaccharides produced by Bacterium typhi flavum, A., III, 488.

Malenke, E., utilisation of sugar-beet shavings in distilleries, B., 1117.

Malenok, N. M., and Sologub, I. V., condensation of methyl hexyl ketone with phenylacetylene, A., II, 190.

Malfitano, G., and Catoire, M., influence of mineral electrolytes in biochemical synthesis of polyholosides, A., III, 389. and Honnelastre, A., colloid chemistry

with reference to molecular association, A., I, 78.

Malfitano, J., constitution of the photon considered as a dipole, A., I, 492.

Malhotra, R. L. See Yajnik, N. A.

Malik, I. I. See Singh, B.

Malin, K. M., formulæ for use in the tower

[sulphuric acid] process, B., 901.

Malinovskaja, N. P. See Gortikov, V. M.

Malinovskaja, V. I., influence of geological factors on productivity of phosphorite layers, A., I, 52.

Malinovski, A. E., possibility of a selective effect of high-frequency fields in flames, A., I, 144.

and Rossichin, V. S., influence of electric field on absorption spectrum of the

acetylene flame, A., I, 111. See also Braschnik, N. I.

Malinovski, M.S. See Petrov, A.D. Malischev, V.N. See Bogoroditski, N.P.Malishev, B., treatment of organic liquids [petroleum hydrocarbons, etc.] with phosphorus pentoxide, (P.), B., 1302.

Malisoff, W. M., and Atlantic Refining Co., treatment of hydrocarbon oil, (P.), B.,

Hess, F. G., and Atlantic Refining Co., hydrocarbon oil treatment, (P.), B., 1302.

Malkana, M. T. See Ganguly, S. N. Malkin, B. A., behaviour of condensate in [fast-running] paper-machine dryers, B., $\tilde{4}27.$

Malkin, S. I., Makarova, T. A., and Sarbeteva, W. S., dynamics of glutathione in disturbed circulation, A., III, 291.

Malkin, T., and El Shnrbagy, M. R., X-ray and thermal examination of the glycerides. II. a-Monoglycerides, A., I, 17.

El Shnrbagy, M. R., and Meara, M. L., X-ray and thermal examination of the glycerides. III. aa'-Diglycerides, A., ĬI, 397.

Malko, M. G., Yanowski, L. K., and Hynes, W. A., qualitative microscopio differentiation between chromate and dichromate ions, A., I, 48.

Malkov, A., and Mesonshik, A., rôle of phosphates in oxidative processes. VII. Activation of growth of yeast by phosphates, A., III, 315.

Malleis, O. O., laboratory tests relating to caking, plastic, gas- and coke-making properties of bituminous coals, B., 998.

Mallick, S. M. K. See Taylor, J. Mallik, P. See Parija, P.

Mallinckrodt Chemical Works. See Shreve. R. N., and Whitmore, F. C.

Mallinckrodt-Haupt, A. S. von. See Carrié,

Mallison, H., water absorption by bituminous paints, B., 61.

Mallmann, W. L., detergents and dis-infectants for use in dish-washing, B.,

Mallmann, W. L., and Shepherd, W. F., disinfection of sewage with minimum amounts of chlorine, B., 847.

Mallory, L. E., and Nash, J. T., filter device, (P.), B., 99.

Mallory & Co., Inc., P. R. See Hensel, F. R., and Weiger, J. A.Mallory Patents Holding Co., Ltd., etching

of metals [aluminium], (P.), B., 148. Malloy, H. T., and Evelyn, K. A., determin-

ation of bilirubin with the photoelectric colorimeter, A., III, 336.

Malloy, P. V. See Kemet Labs.

Malm, C. J. See Eastman Kodak Co.,
and Kodak, Ltd.

Malmberg, M. See Euler, H. von.

Malméjac, J., and Desanti, E., extracts of the pineal gland and secretion of adrenaline, A., III, 403.

Malmstrom, H. E. See Davis, M. N. Malorny, E., and Netter, H., behaviour of sodium in the working mammalian

muscle, A., 175. Malotaux, R. N. M. A., and Straub, J., thermal analysis of organic substances. III. Application of method to ternary

systems without mixed crystals, A., I, 243. Malov, N. A., and Volkind, V. M., conductometric determination of water in salts, A., I, 323.

See also Vdovenko, $V.\ M.$ Malov, $S.\ I.$, Jakolov, $P.\ J.$, and Eliseev, A. A., rapid determination of silicon in special steels, B., 447.

Malozemoff, P. See Gaudin, A. M.

Malsch, J., anomalous dispersion in dipole liquids, A., I, 65. Structure of dipole liquids, A., I, 285.

Malsch, L. See Zimmermann, W.

Maltaner, E. See Wadsworth, A. Maltaner, F. See Wadsworth, A.

Maltbie Chemical Co. See Fosbinder, R.J.Malthy, J. G., impurities in electrodes for spectrometer work, A., I, 332.

Maîterre, H. See Joret, G.

Maltschevskaja, M.N. See Isatschenko, B.L.Maltzev, P. M. See Charin, S. E., and Dumanski, A. V.

Maluquer, J. M. F., determination of free lime in Portland cement, B., 552.

Maly, J., gasometric analysis, A., I, 635. Maly, J., technical analysis of gases, especi-

ally of those containing ethane, B., 1154.

Malychev, V., soil of Western Morocco;
brown soil formed at the expense of hamri, B., 476.

Maman, A., hexane and some hydrocarbons, A., I, 176. Octanes, A., I, 558.

Mamasachlisov, V. I., collisions of slow neutrons with protons, A., I, 109. Transmutation of beryllium by y-rays, A., 1, 162.

Mameli, E., and Carretta, U., analysis of the water, gas, and mud of the "pre-historic" thermes of the Montegrotto thermes (Colli euganei), A., I, 154.

Mamikin, P. S., and Zlatkin, S. G., kinetics of silicate formation in the system CaO-

SiO₂, A., I, 623.

Mamoli, L., and Vercellone, A., biochemical transformation of A4-androstenedione into Δ^4 -testosterone; genesis of the male sexual hormone, A., II, 199. Biochemical hydrogenation of dehydroandrosterone, A., III, 143. Genesis of the testicular hormone; biochemical transformation of 45-androstenedione into isoandrostanediol and △⁴-testosterone, A., III, 492.

See also Ercoli, A., and Vercellone, A.

Mamon, C. T., biochemical analysis of kanduli (Arius spp.) at different ages, B., 724.

Man, E. B., stability and determination of phosphatides, A., III, 108. and Gildea, E. F., variations in lipæmia

of normal subjects, A., III, 372. Manahan, J. A., liberation of fibres, (P.),

B., 27.

Maneeau, P., Policard, A., and Ferrand, M., chemical determination of ascorbic acid. II. Purification; determination in urine, A., III, 45.

Mancinelli, P. See Grossi, C.

Mancini, J., and Archangel, N. D., apparatus for ageing whisky or other alcoholic beverages, (P.), B., 487.

Mancini, M. A., pharmacology of ethylene glycol, A., III, 134. Pharmacology of smooth muscle; luminal-papaverine, A., IlI, 137.

Mande, A. See Coste, F.

Mandel, E. See Popper, H.

Mandelbaum, T. See Ralli, E. P.

Mandelstam, S. L., spectral analysis of metals, B., 688. Application of spectral methods in analysis of metals, B., 1356.

Raiski, S. M., and Tzeiden, V. V., spectrum analysis of wrought iron for silicon and chromium, B., 445.

Smirnov, V. F., and Tzeiden, V. V., spectrum analysis of alloy steels, B., 447.

See also Ivantzov, L. M., and Vedenski,

Mandeville, D. C., permanent surface protection for aluminium, B., 1223.

Mandl, F. See Friedrich, A. Mandrik, G. F. See Postovski, I. J.

Manegold, E., capillary systems. XVIII(1). New technique and apparatus for preparation, characterisation, and use of membranes. XIX (1). Hollow-space systems. XIX (2). Calculation and experimental determination of free space in compact or coherent material, A., I, 180, 612; B., 1142. Effectiveness of filtration, dialysis, electrolysis, and their intercombinations as purification processes, A., I, 514.

and Solf, K., capillary systems. XIX. (3) Effective free space in branched canal systems, A., I, 612. Airpermeability of paper and nitrocellulose membranes, B., 1188.

Manen, B. van, optical dissociation of polyatomic molecules in vapours, A., I,

Manen, E. van, and Rimington, C., enzymic activity of egg-white: its bearing on watery whites, A., III, 220. Manery, J. F. See Irving, L.

Manes, M. See Lehrman, L.

Manfred, O., de-airing of clay and foliation, B., 1049. Vacuum presses porcelain industry, B., 1050.

Manfredini, L., aluminium: an Italian problem, B., 1357.

Mang, J., mine-timber preservation, B., 1345.

Mangelschots, H., albumins in cerebrospinal fluid, A., III, 201.

Mangelsdorf, A. J., [sugar-cane] growth-failure problems, B., 1389.

Mangelsdorf, T. A., Sowers, B. L., and Deutser, A. J., measurement of flow rates of hot oil streams by the dilution method; naphthenic acid as diluent, B., 108.

Mangeney, G. See Battegay, M.

Mangiacapra, A., urinary $p_{\rm H}$ as a function of fatigue in airmen, A., III, 254. Emotional change in urinary pH in airmen, A., III, 254.

Mangini, A., aromatic nitro-derivatives. IX. 1-Bromo-3:4-dinitrobenzene. XI. Action of some diamines on 1-chloro-2:4-dinitronaphthalene. XII. Action of certain hydrazines on 1-chloro-2:4dinitronaphthalene. XIII. Substituted a-naphthylamines, A., II, 121, 390, 453, 493. Reactivity of the substituents in benzene derivatives, A., II, 140. Dipole moment, configuration, and reactivity of aromatic nitro-derivatives, A., II, 140. Substi-tuted anilines, A., II, 185. Action of bromine on phenyl o-hydroxystyryl ketone, A., II, 199. Tribromoethyl borate, A., II, 396. Pharmaceutical application of furfuraldehyde. II., A., II, 428. [Metallic salts of] diazoamino-compounds. IV., A., II, 454. Pharmaceutical applications of furfuraldehyde. I., A., II, 524.

and Frenguelli, B., aromatic nitro-derivatives. X. Naphthalene deriv-atives, A., II, 453.

See also De Carli, F.

Mangold, E., relation between animal and human nutrition, A., III, 16.

and Columbus, A., feeding value of thirdquality dried sweet lupin grain, B.,

and Stotz, H., nitrogen balance in cattle using urea and "amide flakes" as protein substitutes, A., III, 18. Palatability and digestibility of new urea-containing feeding-stuffs, B., 1403.

Mangun, G. H., and Myers, V. C., creatine, potassium, and phosphorus content of cardiac and voluntary muscle, A., III, 167.

See also Muntwyler, E.

Manhattan Co. See Holslag, C. J.

Manjunath, B. L. See Jois, H. S., and Krishnaswamy, P. R.

Mankin, W., attempt at quantitative analysis of silver-gold alloys by optical spectroscopy, B., 450.

Mankodi, G. F., Barve, P. M., and Desai, B. N., dialysis in the study of colloids. III. Colloidal Prussian-blue, A., I.

Joshi, C. B., Barve, P. M., and Desai, B. N., conductivity and cataphoretic speed measurements of colloidal Prussian-blue and arsenious sulphide, A., I, 182.

Mankoff, H. J., rotor for hammer mills, (P.), B., 3. Screen for hammer-mill grinders, (P.), B., 992.
Mankovičs, E. See Straumanis, M.

Manley, C. H., determination of tartaric acid as lead tartrate, A., II, 367.

Manley, J. H., and Millman, S., nuclear spin and magnetic moment of Li. A., I, 103.

Manley, J. J., short-period platinum thermometers, A., I, 265. Manley, R. E. See Texas Co.

Manlove, Alliott & Co., Ltd., Alliott, E. A., and Read, F., drying machines, (P.), B., 856.

and Gillespie, W., centrifugal machines, (P.), B., 99.

and Hodges, J. M., apparatus for sterilising, disinfecting, washing, and similar purposes, (P.), B., 986.

Manly, R. S. See Murlin, J. R., and Murlin, W. R.

Mann, C. A. See Litkenhous, E. E.

Mann, D., red_squill and its use in combating rats, B., 733.

Mann, D. IV. See Frost, A. A., and Hoxton, L. G.

Mann, F. C. See Bollman, J. L., McGowan, J. M., Soskin, S., and Stekol, J. A.

Mann, F. G., and Chaplin, E. J., polarity of the co-ordinate link. II. Influence of aromatic substitution on stability of the phosphinimines, A., II, 528.

Purdie, D., and Wells, A. F., constitution of complex metallic salts. V. Constitution of phosphine and arsine derivatives of cuprous iodide; configuration of co-ordinated cuprous

complex, A., I, 15.
and Wells, A. F., phosphine and arsine
derivatives of the group I (b) metals: volatile derivatives of gold, A., II, 449.

Mann, H. B. See Skinner, J. J.
Mann, H. C., high-velocity tension impact tests [on metals], B., 793.

Mann, H. H., character of barley grown on soil made acid with sulphate of ammonia, B., 271.

Mann, K. C. See Burton, E. F. Mann, K. E. See Auer, H.

Mann, M., and Schanderl, H., manuring with carbon dioxide in greenhouses, B., 377.

Mann, M. M. See Sandholzer, L. A. Mann, M. M., jun., and Du Bridge, L. A., absolute photo-electric yields of Mg,

Be, and Na, A., I, 105.

Mann, P. J. G., and Quastel, J. H., oxidation of choline by rat's liver, A., III, 260.

Mann, T. See Keilin, D. Mann, W. B., exchange of energy between a platinum surface and helium atoms and its dependence on the structure of the surface, A., I, 553. Nuclear transformations produced in copper by a-particle bombardment, A., I, 594.

and Newell, IV. C., exchanges of energy between a platinum surface and hydrogen and deuterium molecules, A., I, 294.

Manneback, C., and Verleysen, A., fundamental vibration frequencies of molecules C_2H_4 , C_2D_4 , and $C_2H_2D_2$, A., I,

See also Delfosse, J. M., Lemaitre, G., and Verleysen, A.

Manneck, H., practical soap-making. I. Hard soap, B., 805.

Mannes, L. D. See Eastman Kodak Co. Mannesmannröhren-Werke, and Ruhr-chemie Akt.-Ges., synthetic hydro-

carbons, (P.), B., 523. "Sachtleben" Akt.-Ges für Bergbau & Chemisehe Industrie, and Eichenberg;

G., ferromanganese, (P.), B., 249. Mannhart, E. See Fierz-David, H. E. Mannheimer, J., bitumen compositions, (P.), B., 644.

Mannich, $C_{\cdot \cdot}$, and Baumgarten, $G_{\cdot \cdot}$, closure and opening of the trimethyleneimine ring, A., II, 137.

Borkowsky, F., and Koch, Willi, synthesis of 2-ketodecahydronaphthalene from

cyclohexanone, A., II, 153.
Borkowsky, F., and Lin, W. H., tetrahydronaphthalene derivatives with basic side-chains, A., II, 99.

and Fresenius, P., chief constituent of the ethercal oil of Asafætida, A., II, 3.

Mannich, C., and Hoffmann, W., reaction product of quinoline and ω-chloroacetopyrocatechol, A., II, 32.

and Roth, K., reaction of crotonaldehyde and amine salts, A., II, 50.

Schumann, P., and Lin, W. H., glucoside of Belamcanda chinensis (L.,) Leman (Pardanthus chinensis, Ker.), shekanin (tectoridin), A., II, 276.

Manning, F. W., and Manning Co., F. W. process of filtration, (P.), B., 1289. Juice-extraction filter, (P.), B., 1289. Fabric filter, (P.), B., 1289. Beverage filter, (P.), B., 1289. Surface-type fabric filter, (P.), B., 1289.

Manning, J. J., and Coull, J., spectrographic determination of platinum by the constant-pair method, B., 450.

Manning, J. R. See Berry, M. H. Manning, M. F., and Krutter, H. M., electronic energy bands in metallic calcium, A., I, 348.

Manning, P. D. V., chemical plant valves, B., 853.

See also Chesny, H. H. Manning Co., Ltd., F. W. See Manning, F. W.

Manning Paper Co., J. A., paper, (P.), B.,

Manninger, G. A., jun., and Frank, M., arable soil as a biodynamic system, B., 1248.

Mano. G., relation between the kinetic energy and range of protons; case of artificial transmutations, A., I, 340.

Manolescu, (Mile.) L., heteropolar compounds. III. Argenti-salts of derivatives of 4-hydroxy-2-thion-1:2:3:4-tetrahydroquinazoline, A., II, 351.

Manov, G. G., and Kirk, P. L., determination of sulphate ion; micro-volumetric chromate method, A., I, 324.

See also Brown, O. L. I. Mansfeld, G., and Lanczos, A., metabolic action of thyroxine in cold-blooded animals, A., III, 42.

Mansfeld Akt.-Ges. für Bergbau & Hüttenbetrieb Abt. Kupfer- & Messingwerke, aluminium bronzes, (P.), B., 458.

Mansfield, J. Y. See Kharasch, M. S. Mansfield, T. J. G., and Fraser, L. S., production of articles by shaping from plastic materials, (P.), B., 591.

Mansikkala, L. See Virtanen, A. I. Manskaja, S. See Kursanov, A. L. Manske, R. H. F., alkaloids of fumari-

aceous plants. XI. Two new alkaloids, corlumine and corlumidine, and their constitutions. XII. Corydalis scouleri, Hk. XIII. Corydalis sibirica, Pers., A., II, 80, 265. Natural occurrence of acetylornithine, A., III, 244.

Manson, G. J., and Manson Chem. Co.,

[wax] emulsions [for sizing paper, etc.]; (P.), B., I54.

Manson Chemical Co. See Manson, G.J.Mansour, $K_{\cdot,\cdot}$ and Mansour-Bek, $J_{\cdot,\cdot}$ $J_{\cdot,\cdot}$ cellulase and other enzymes of the larvæ of Stromatium fulvum, Villers, A., III, 430. Mansour-Bek, J.J. See Mansour, K.

Mantegazza, A., uses and applications of formaldehyde. I. Formaldehyde in the industrial field, B., 212.

Mantell, C. L., Allen, C. H., and Sprinkel, K. M., physical and chemical properties of natural resins, II. Analytical data. II. Solubilities, B., 588. and Rubenkoenig, H. L., Manila resins: origin, properties, and applications, B., 1084.

Mantere, V. See Kanko, Y.

Manteuffel, R. See Borsche, W. Mantius, E., and Freiherr, H. F., leadlined equipment, B., 924.

Mantle Lamp Co. of America. See Reiss, F. O.

Manton, S. M. [with Heatley, N. G.], onychophora. II. Feeding, digestion, excretion, and food storage of Peripatopsis, A., III, 466. Mantschev, V. P., "ultra" sulphur, B.,

Mantzell, E., cathodic current distribution in electrolytes. II. Nickel baths, B., 923. Manufactures de Machines Auxiliares pour l'Electricité & l'Industrie, filtering; (P.), B., 994.

Manughevici, C. See Candea, C.

Manuilov, P. See Weichherz, I.
Manunta, C., carotenoids of cocoons from a crossed strain of silkworm, A., III, 252. Pigments of eggs and skin of the chameleon, A., III, 252. Variations in proportions of constituents of silk secretion in different parts of the silk-glands during development, A., III, 252.

Manville, I. A., interrelationship of vitamin-A and glycuronic acid in mucin metabolism, A., III, 125.

Manz, G. See Braun, J. von.

Manzella, G., raisin-seed oil as a petroleum substitute, B., 204. Possibility of using methyl alcohol in injection engines, B., 752.

Manzoni-Ansidei, R., Raman spectrum of anthracene, phenanthrene, and 9:10dihydroanthracene, A., I, 10. Raman spectrum of aromatic hydrocarbons with condensed nuclei. I. Anthracene and phenanthrene and their molecular symmetry, A., I, 283. See also Boulno, G. B. (1997) and the second

Mapes, D. W. See Frankforter, C. J. China Marais, O. A. S., and McMichael, J., theophylline-ethylenediamine [euphyllin] in Cheyne-Stokes respiration, A., III, 369.

Marakaev, A. A. See Platonov, M. S. Marangoni, P. See Butturini, L.

Marathon Paper Mills Co. See Sandborn, L. T.

Marbaker, E. E. See Phelps, S. M. Marble, A. See Root, H. F., and Smith, R, M

Marble, J. P., at. wt. of lead from galena, Great Bear Lake, N.W.T., Canada, A., I, 274. Age of the Great Bear Lake pitchblende, A., I, 538.

Marbo Patents, Inc. See Winkelmann, H.A. Marbo Products Corporation, coated sheet and web material, (P.), B., 29.

See also Kratz, E. M., and Winkelmann, H.A.

Marcard, W., central-heating experiments with anthracoke, a medium temperature coke from the Zeche Barsinghausen, Hannover, B., 638. Combustion as a flow process, B., 868.

Marcelet, \hat{H} ., new alcohol from oil of raspberries, A., III, 331.

Marceron, $L_{\cdot,\cdot}$ and De Mauny, $H_{\cdot,\cdot}$ $C_{\cdot,\cdot}$ hemolytic power of saponins in vitro and their effect on the viscosity of blood-serum, A., III, 292.

March, A., theory of nuclear forces, A., I, 546.

March, G. A. See Briggs & Sons, W. Marchant, J. H., electrical resistance method of determining mean surface temperature of tubes, B, 507.

Marchgraber, R. See Schmid, H. Marchlewski, L. See Grinbaum, (Miss) R. Marcille, M. R., analytical methods for wine, B., 1258.

Marcinków, A., and Plazek, E., reactivity of aromatic chloro-derivatives; action of amines on halogens substituted in the nucleus, A., II, 54.

Marconi, F., and Di Marco, I., adrenaline content of the adrenal glands. I. Determination in small laboratory animals. II. Determination in rabbits and dogs killed by slow and rapid hemorrhage, traumatic destruction of the medulla [oblongata], and gaseous emboli. III. Content in rabbits anasthetised or killed with ether or chloroform. IV. Content in rabbits poisoned with phosphorus or strychnine. V. Determination in animals after fatal insulin shock, combined action of insulin and atropine, or anaphylactic shock, A., III, 399.

Marconi's Wireless Telegraph Co., Ltd., and Leverenz, H. W., fluorescent screens suitable for use in cathode-ray tubes,

(P.), B., 56.

Marconnay, A. von B., electrical external and internal heating of vessels of fused silica, with especial reference to internal heating by submerged units, B., 148.

Marcovitch, S., and Stanley, W. W., new form of "cryolite" [insecticide], B., 711.

Marcus, A. See Sandor, G.

Marcy, B., effect of ethylene chlorohydrin and thiourea on Elodea and Nitella, A., III, 239.

Mardaschev, S. See Kahovec, L., and Levene, P. A.

Marden, A. L., flow of glass in tanks, B., 438. Marder, M., determination of analytical data of mineral oils on the basis of density measurements, B., 204. Simplification of the analysis of mineral oils by using density relationships, B., 1006.

[with Sommer, F.], relationship between analytical data and ignitability of Diesel fuel, B., 316.

and Frank, J., determination of methyl and ethyl alcohol in light motor fuels, B., 206.

and Gomez Aranda, V., application of physical constants to analysis of mixtures of hydrocarbons. I. Fundamentals and experimental proof. II. Study of petrols from petroleum and from cracking and hydrogenation processes, B., 315.

See also Heinze, R.

Mardner, P. See Kanfmann, H. P. Marechal, J. R. See Thyssen, H.

Mareis, A. See Scheibe, G.

Marek, J., Wellmann, O., and Urbányi, L., bone analysis in diagnosis of bone diseases of animals, A., III, 343. See also Binet, L.

Marek, K. Scc Cupr, V. Marek, L. F. See Standard Oil Development Co.

Marenzi, A. D., fate of phenol injected into the circulating blood, A., III, 305. and Gerschman, R., adrenaline and blood-potassium, A., III, 149.

See also Foglia, V. G., and Houssay, B. A. Mares, J. R., and Monsanto Chem. Co., plastic compositions [plasticisers], (P.), B., 262. Carboxylic acid chlorides, (P.), B., 1024.

Margaretha, H., and Mark, H., surface structure of natural and artificial fibres, $^{11}\mathrm{Ba},\,1318.$ The space split set is 12

Margaria, R., and Ferrari, R., regeneration of carbonic anhydrase in the blood of Rana salata, A., III, 289.

and Moruzzi, G., anaerobic recovery of muscle, A., III, 21.

Rowinski, P., and Goldberger, S., state of carbon dioxide in solutions containing hæmoglobin, A., III, 370.

Margenau, H., and Warren, D. T., longrange interactions between dipole

molecules; A., I, 349.
and Watson, W. W., pressure shifts of krypton lines, A., I, 540.

See also Watson, W. W.

Margitay-Becht, E., and Wallner, E., change in weight produced by growth hormone in avitaminotic rats, A., III,

Margolina, R. S. See Magidson, O. J. Margolis, E. T. See Kharasch, M.-S. Margolis, F. See Dubovitzki, A. M.

Margules, V., and Trummer, J., organic fertiliser having fungicidal, germicidal, and insecticidal properties, (P.), B., 482.

Margnlis, H. See Clarens, J.
Marian, V., ferromagnetic Curie points and the saturation of nickel alloys, A., I, 297. Atomic moments and Curie points

in solid solutions of nickel, A., I, 503. Mariëns, P. See Itterbeek, A. van.
Mariller, C., rectification by absorbents: preparation of absolute alcohol, B., 77. Modern equipment of starch factories, B., 175.

and Desse, influence of salts in [ethyl alcohol] distillation, B., 486.

Marimpietri, L., contents of protein substances and of phytin in the seeds of cereals during their development, A., i III, 189.

See also Tommasi, G.

la İran dayad Marine Chemicals Co., Ltd., magnesium hydroxide, (P.), B., 908.

See also Chesney, H. H., and Farnsworth, W.H.

Marineseu, M. See Blum, I. L. Marini, G. B. See Dinelli, D.

Marini, M., microscopical investigation of vegetable parchment and substitutes, B.,

Marino, A. J., and Gilby Wire Co., coating of ferrous strip material [with carbon], (P.), B., 800.
Marino, S., and Saladino, A., polypept-

idæmia in cases of gastro-duodenal ulcers, A., III, 343.

Marino, V., disinfectant action of bergamot oil, B., 624.

Marjanović, V. See Njegovan, V.

Mark, H.; elasticity of long-chain sub-stances as a statistical effect, A., I, 402. Significance of electronic diffraction in scientific and technical questions, A., I, 448. Replacement of small adsorbed molecules by larger [molecules], A., I, 457. Synthesis of large molecules, A., II, 315. Reaction kinetics of combustion processes, B., 752.

and Meyer, K. H., crystal structure of cellulose, A., I, 502.

and Philipp, H., structure of proteins as revealed by X-rays, A., I, 172.

See also Broda, E., Dostal, H., Eirich, F., Guth, E., Kratky, O., and Margaretha, H_{\bullet}

Mark, J. J., relation of reserves to coldresistance in Iucerne, A., III, 235.

Marke, D. J. B., thermal decomposition of calcium azide, A., I, 367.

Marker, R. E., and Kamm, O., sterols. XVII. Isolation of pregnanolone from human pregnancy urine, A., II, 424. Kamm, O., Fleming, G. H., Popkin,

A. H., and Wittle, E. L., sterols. X. Cholesterol derivatives, A., II, 250...

Kamm, O., and Jones, D. M., sterols. XVIII. Preparation of epialloprognanolone from allopregnanediol, A., II,

Kamm, O., Jones, D. M., and Mixon, L. W., sterols. XIV. Pyroandrosterone and derivatives, A., II, 424.

Kamm, O., Jones, D. M., and Oakwood, T. S., sterols. VIII. Preparation of androstanedione from allopregnane. diol, A., II, 250.

Kamm, O., Jones, D. M., Wittle, E. L., Oakwood, T. S., and Crooks, H. M., sterols: XII. Synthetic preparation of epiallopregnanolone, the androgenic principle of human pregnancy urine, A., II, 250.

Kamm, O., Laucius, J. F., and Oakwood, T. S., sterols. XIX. epiErgosterol and epi-a-ergostenol, A., II, 496.

Kamm, O., McGinty, D. A., Jones, D. M., Wittle, E. L., Oakwood, T. S., and Crooks, H. M., sterols. XV. Synthetic preparation of epiallopregnanolone, the androgenic principle of human pregnancy urine, A., II,

Kamm, O., and McGrew, R. V., sterols. IX. Isolation of epipregan-3-ol-20-one from human pregnancy urine, A., II,

Kamm, O., Oakwood, T. S., and Tendick, F. H., sterols. XIII. Dihydroequilenins, A., II, 250.

Kamm, O., and Wittle, E. L., sterols. XX. The pregnanolones, A., II, 505. Wittle, E. L., and Mixon, L. W., sterols. XVI. Lanosterol and agnosterol, A.,

II, 416. Markevitsch, I., characterisation of free sulphur in $[\beta\beta']$ -idichlorodiethyl sulphide; B., 646.

and Kolesova, M., influence of nonelectrolytes on stability of sulphur sols, A., I. 238.

and Kolomitzeva, M., influence of light on formation of different modifications of colloidal sulphur of Raffo, A., I,

Markham, A. E., integration of the drying equation at constant temperature, B., 851.

Markhoff, F. See Nischk, K. Markley, K. S., Nelson, E. K., and Sherman, M.S., wax-like constituents from expressed oil from peel of Florida grapefruit, Citrus grandis, A., III, 244.

and Sando, C. E., wax-like constituents of the cuticle of the cherry, Prunus avium, L., A., III, 367.

Markley, M. C., variability in carotenoid pigment content of individual plants of Triticum vulgare and T. durum, A., III, 333... Colloidal behaviour of flour doughs; thixotropic nature of starchwater systems, B.: 832.

and Treloar, A. E., influence of individual milling technique on flour and loaf characteristics, B., 832.

Markov, I. F. See Salkind, J. S.

Markov, L. I., intensification of the tower sulphuric acid process, B., 900.

Markov, M., Dirac theory of the electron.

I. and II., A., I, 341.

Markov, V. K., and Nagornaja, N. A., change in properties of silica gel during washing, as a result of changes in its submicrostructure, B., 906.

Markova, K. See Leonteev, H., and Leonteev, I.

Markovski, L. J., reactivity of carbonaccous materials in the synthesis of carbon disulphide, B., 875.

Marks, A., corrosion protection in [oil]

refineries, B., 354.

Marks, B. M., and Du Pont Viscoloid Co. modified [cellulose ester and ether] compositions, (P.), B., 1037.

Marks, E. M., Lipkin, D., and Bettman, B., synthesis of ethyl isobutyl ether, A., II, 271.

Marks, M. E. See Russell, W. W. Marks, W. M. See Washington, L.

Markush, E. A., Mayzner, M. S., Miller, Julius, and Pharma Chem. Corp., [azo-] compounds for dyeing and printing, (P.), B., 884.

and Pharma Chem. Corp., tetrazoimino-compounds, (P.), B., 1178.

Markuze, Z., biological value of the proteins of certain cereals, A., III, 504.

Markwick, A. H. D., shape of crushed stone and gravel and its measurement, B., 443.

Marler, E. E. J., and Turner, E. E., orientation effects in the diphenyl XIII. Nitration of four halogeno-4:4'-dimethyldiphenyls, A., II, 141.

Marlow, D. See DuMond, J. W. M.
Marlow, H. W., uterine response to dihydrotheelin, A., III, 74.

and Kock, F. C., effect of sex hormones on blood-calcium and inorganic bloodphosphate levels, A., III, 402.

See also Huey, S. L.

Marlu Gold Mining Areas, Ltd., and Stevens, T. B., treatment of ores or metallurgical products containing pre-cious metals, (P.), B., 1361. Marmorstein, E. See Waldmann, H.

Marnay, A., action of acetylcholine on isolated muscle, A., III, 390. Action of acetylcholine on minced muscle, A., III, 390.

Minz, B., and Nachmansohn, D., cholineesterase in nervo endings of striated

muscle, A., III, 268.

and Nachmansohn, D., choline-esterase in striated muscle, A., III, 139, 220. Effect of sympathomimetic and parasympathomimetic substances on the chemical processes producing the energy of muscular contraction. II. Effect of acetylcholine, A., III, 265. Distribution of choline-esterase in the sartorius muscle of the frog, A., III, 268. Choline-esterase in lizard's muscle, A., III, 311. Choline-esterase in voluntary frog's muscle, A., III, 353. Choline-esterase in the nerves of the lobster, A., III, 393.

Maron, G., essential oil of angelica, B., 1133. Marples, E. See Levine, S. Z.

Marquard, F. F., coal constituents for coking, (P.), B., 1158.

Marquardt, F., influence of pharmaceuticals on experimental ursol sensitisation in animals, A., III, 178.

Marquardt, J. C., salting and cooking of curds in manufacture of varieties of cheese, B., 80. Sugaring of curd in manufacture of Cheddar cheese, B., 834. Modifying flavour in Cheddar cheese, B., 1400.

and Hucker, G. J. making Cheddar cheese from milk with low curd tension due to latent mastitis, B., 1262.

Marracino, R. See Maymone, B. Marriage, A., effect of processing conditions on [photographic] graininess, B., 844.

Marrian, G. F. See Butler, G. C., Cohen, S. L., Odell, A. D., and Schachter, B.

Marriott, G. J. See Harris, R. M.

Marriott, R. H., Dugan, B. B., and Berk &
Co., Ltd., F. W., compositions for use in the washing of textilo materials or for other washing purposes, (P.), B., 432.

Marrison & Catherall, Ltd., and Catherall A. C., [aluminium-nickel-iron alloy] permanent magnets, (P.), B., 359.

Marrs, C. D. See Fraps, G. S. Marryat, E. R. See Riddet, W.

Mars, G., and Hirsch, R., induction furnaces, (P.), B., 55.

Marschalk, C., condensations of the anhydride of 1:4-dihydroxyanthraquinone-2:3-dicarboxylic acid, A., II, 107. Action of hydroxylamine on quinizarin and its derivatives in alkaline medium, A., II, 252. Linear pentacene series, A., II, 425.

Marschek, Z. See Barta, L.

Marsden, A. M., modern dough-testing

machine, B., 1119. Marsden, C. J., and Evans, E. J., magnetooptical dispersion of organie liquids in the ultra-violet region of the spectrum. XI. Magneto-optical dispersion of methyl malonate, isopropyl propionate, isopropyl butyrate, ethyl isobutyrate, and

tert.-butyl alcohol, A., I, 551.

Marsden, C. P., and Hygrade Sylvania Corp., cathode-ray tube, (P.), B., 583. Fluorescent coating method, (P.), B., 583.

Marsden, E. See Hodgson, H. H. Marsden, J. C. See Portals, Ltd. Marsden, R. J. B., preparation of diphenylp-tolylamine and phenyldi-p-tolylamine, A., IĬ, 237.

Marsh, A. E. L. See Goodeve, C. F. Marsh, E. C. J., and Mills, E., protection of light alloys, B., 797. See also Mills, E.

Marsh, F. L., and Best Bros. Keene's Cement Co., decolorising [native] gypsum, (P.), B., 342.

See also Best, J. C.

Marsh, G.L. See Joslyn, M.A. Marsh, J.K., preparation of ytterbous sulphate and its elimination from lutecium sulphate, A., I, 527.

Marsh, J. T. See Tootal Broadhurst Lee Co. Marsh, L. E. See Renfrew, P. B.

Marsh, M. E., utilisation of hexoses by excised rat tissues, A., III, 260.

Marsh, R. S., soil-nitrate determinations following application of calcium eyanamide and sodium nitrate to the surface of soil under apple trees during dry and normal seasons, B., 600.

Marsh, R. W. See Kearns, H. G. H.

Marshall, A. L., Dornte, R. W., and

Norton, F. J., vapour pressure of copper

and iron, A., I, 453.

Marshall, C. E., colloidal properties of clays as related to their crystal structure, A., I, 614. Soil science and mineralogy, B., 1095.

Marshall, C. O., and Toledo Scale Manuig. Co., volumetric [density-]testing device, (P), B., 742.

Marshall, C. R., and Norris, F. W., analysis of carbohydrates of the cell wall of plants. III. Determination of methylpentoses: factors influencing the decomposition of methylfurfuraldchyde during distillation. IV. Determination of methylpentoses as methylfurfuraldehyde: methods of distillation and precipitation, A., III, 367,

Marshall, E. K., jun., determination of sulphanilamide in blood and urine,

A., III, 334.

Emerson, K., jun., and Cutting, W. C., p-aminobenzenesulphonamide; absorption, excretion, and determination in blood and urine, A., III, 211. Acetylation of p-aminobenzenesulphonamide in the animal organism, A., III, 212.

Marshall, J., non-lead arsenicals [as sprays],

B., 1389.

and Groves, K., calcium arsenate for codling moth control, B., 714.

Marshall, J. S., and Ward, A. G., absorption curves and ranges for homogeneous β -

rays, A., I, 275.
Marshall, M. J., and MacInnes, A. S., heat of adsorption of oxygen on charcoal at low surface concentrations, A., I,

Walker, F., and Baker, D. H., efficiency of packings of laboratory distilling

columns, A., I, 268.

Marshall, P. G., hydroxyanthraquinones. II. 1:2:5:6- and 1:4:5:8-Tetrahydroxyanthraquinones, A., II, 156. p-Cresol from the urine of pregnant mares, A., 111, 417.

Marshall, R. E., Overley, F. L., and Groves, K., relation of washing treatments to subsequent losses of moisture from apples, B., 182.

See also Groves, K.
Marston, W. L., obtaining an animal oil from crude mixtures containing water, (P.), B., 259. Martelli, U. Sec Nuccorini, R.

Martens, J., variation in dielectric constant of silver bromide on illumination, A., I, 12.

Martens, M., and Osselaer, A. van, [mechanical] dehairing of hides, (P.), B., 375.

Martens, O., production of 98-99% potassium chloride by washing with dilute brine and water, B., 339.

Martens, R., double nitrogen [determinations for evaluation of the peptide-nitrogen of blood], A., III, 3.

Marter, C. H. V. See Union Oil Co. of California.

See Gardner, F. E. Marth, P. C. Martin, A. E., determination of aluminium by titration with alkali, A., I, 477.

See also Fox, J. J., and Robertson, (Sir) R.

Martin, A. L., toxicity of selenium to plants and animals, B., 1254.

Martin, A. R., dipole interaction in mixtures of benzene with its polar derivatives, A.,

I, 127.

Martin, A. W., and Field, J., jun., active form of 2:4-dinitrophenol in the stimulation or inhibition of oxygen consumption of excised rabbit muscle, A., III, 308.

Martin, C. See Pauthenier, M. Martin, C. H., short-cycle malleable annealing furnaces, B., 1352.

Martin, D. See Carne, W. M.

Martin, Douglas. See Luck, J. M.

Martin, E., effect of small deformations on fine-structure X-ray photograms [of metals], B., 1218.

Martin, E. J., and Gen. Motors Corp.,

quantitative spectroscopic analysis and apparatus therefor, (P.), B., 1150.

Martin, F., industrial synthesis of petrol and oil from water-gas, B., 1005.

Martin, G. D., and Monsanto Chem. Co., [preservation of] rubber composition, (P.), B., 1380.

Martin, G. J., vitamin-E, A., III, 497. Martin, H. See Fajans, E., Forshaw, J. E.,

and Kearns, H. G. H.
Martin, H. E. See Peters, G. A., and Reeves, J. R.

Martin, J. See Kesztyüs, L. Martin, J. B. See Deemer, R. B.

Martin, J. F., Martin, P. E., and Receveur, R., selective toxicity of lipins of organs; variation in intensity of hepatic lesions in guinea-pigs following injection of lipins from guinea-pig liver according to solvent used for extraction, A., III, 476. See also Hubler, W. G.

Martin, J. S., worn machine parts re-

claimed by spraying, B., 1141.

Martin, J. T., modern developments in research on insecticides. II. Insecticidal plant products, B., 602.

and Potter, C., colourless active extract

of pyrethrum flowers, B., 286. and Tattersfield, F., evaluation of rotenone-containing plants. II. Derris elliptica, D. malaccensis, and "Sumatra-type" roots, B., 714.
See also Jary, S. G., and Tattersfield, F.

Martin, J. W., and Killeffer, D. H., carbon dioxide from power plant flue gas, B., 906.

Martin, K. See Goldschmidt, Stefan, and Seyer, $W.\ \widetilde{F}.$

Martin, L. C., Whelpton, R. V., and Parnum, D. H., electron microscope, A., I, 152.

Martin, L. F. See Dow Chem. Co. Martin, L. H., and Eggleston, F. F. H., Auger effect in xenon and krypton, A.,

I, 273. See also Eggleston, F. F. H.

Martin, O. C., and Clark, Charles W .. treatment of refinery sludges containing selenium and tellurium, (P.), B., 780.

Martin, O. V., and Texaco Salt Products Co., metallic [calcium] chloride, (P.), B., 542. Recovery of salts and other products from oilfield brines, (P.), B.,

Martin, P. E., and Recevenr, E., sensitisation of guinea-pigs with heterogenic lipins together with a suspension of carbon particles, and ineffective attempts at autosensitisation with the animal's own lipins, A., III, 294.

See also Martin, J. F., and under Etienne-Martin, P.

Martin, R., dispersion curves of the reflecting powers of natural tellurides, A., I, 228.

See also Pien, J. Martin, R. C., synthetic enamels, B., 345. Martin, R. W., vitamin-free diets and the action of insulin, A., III, 403.

Martin, S. M., jun., and Patrick, J. C., constitution of polysulphide rubbers, B., 66. Martin, W. Sec Lange, E.

Martin, W. E. See Mitchell, J. W.

Martin, W. E. See Mitchell, J. W.
Martin, W. G., and Smith Corp., A. O., enameling [of tanks], (P.), B., 672.
Martin, W. Howard. See Bernstein, H. J.
Martin, Walter H. See Peabody, E. H.
Martin, Williard H., Caulfield, W. J., and Fay, A. C., evaporation and spray

systems of cooling cream, B., 971. See also Caulfield, W.J.

Martin, W. S. See Snoddy, A. O. Martin Co., J. B., non-crumpling fabrics, (P.), B., 337.

Martina, A. See Chwala, A. Martineau, L., and Prévost, C., catalytic dehydrogenation of a tertiary alcohol to a ketone, A., II, 396.

Martineaus, Ltd., and Baxter, F. S., rapid determination of moisture content of sugars, using a special oven, B., 175.

Martinenghi, G., asphalts, bitumens, and pitches, B., 1003.

Martinenko, A. K. Sec Borshkovski, S. E. Martini, A., highly sensitive and specific microchemical reactions of sparteine with cobalt and iron salts, A., II, 478.

Martini, E., and Copello, F., ratio of dehydroascorbic acid to ascorbic acid in tissues after administration of thyroxine, A., III, 76.

and Torda, C., eserino and muscular function. II. Phosphagen in eserinised muscle, A., III, 391. Acetylcholine-esterase activity of enervated muscle, A., III, 393.

Torda, C., and Belloni, L., eserine and muscular function. I. Total acidsoluble phosphorus in eserinised muscle,

A., III, 391.

Martini, V., biological value of hydrolysed blood-proteins, A., III, 259. Specific dynamic action of perfused blood, A., III, 465.

Martino, G., alimentary factor stimulating sexual development, B., 1129.

Martinov, M., and Veis, J. D., preparation of wood pulp from pine, B., 331.

Martinov, N. P. See Demidenko, T. T.

Martins, T., rapid test for male hormone;

mitosis in accessory genitalia of castrated male rats, A., III, 492.

Martinson, C. E., regulating beaker stand, A., I, 268.

Martinson, E. E. See Salkind, J. S. Martintschenko, I., and Schimko, potentiometric determination of titanium, iron, and molybdenum in ores,

slags, and ferrotitanium, B., 685. Martius, C., degradation of citric acid, A., III, 268.

and Knoop, F., physiological degradation of citric acid, A., III, 174.

Marton, L., resolving power in the electron

microscope, A., I, 50. Martraire, M., determination of sugar in beet, B., 172. Importance of determination of acidity and nitrogen in beet distilleries, B., 1117.

Martus, M. L., and Becker, E. H., primary cell, (P.), B., 803.

Martynoff, M., relations between chemical properties and "colour" of methoxybenzophenoneoximes and their derivatives, A., II, 248.

See also Ramart-Lucas, (Mme.) P. Maruno, T., formation of gallstone. I. Influence of fat-soluble vitamins, especially vitamin-A (cod-liver oil and "biostearin"), on amounts of potassium, sodium, calcium, and magnesium in blood, A., III, 187. Maruta, Y., and Teruyama, K., relation between iodine value and refractive index of some hardened oils, B., 1366.

Maruyama, K., determination of mineral substances in vulcanised rubbers by adding an organic accelerator to the solvent, B., 815.

and Hagisawa, H., glass electrode and its applications. I., A., I, 567.

Marvel, C. S. See Brown, J. H., Cowan, J. C., Du Pont de Nemours & Co., E. I., Glavis, F. J., Ryden, L. L., and Sparks,

Marvin, M. E., oiticica oil—a new product from Brazil, B., 257.

Marvin, O. F., and Mills Alloys, Inc., [thin] tungsten carbide castings, (P.), B., 457.

Marx, A. See Kautsky, H.

Marx, E., radioactive masses, (P.), B., 621. Marx, F. See Haurowitz, F. Marx, J., ostcodystrophy and hormone

influence, A., III, 399.

Marx, W., and Sobotka, H., choleic acids. VI. Isomerism and co-ordinate co-ordinate valency; coloured choleic acids, A., 11, 19.

See also Peck, S. M.

Marzetti, F., biological significance of manganese, A., III, 131.

Masaki, K., absorption spectra of nitro-glycerin, A., I, 61. Absorption spectra of nitrocellulose, A., I, 166.

Masaki, O., and Morita, T., classification of near infra-red spectrum of mercury. II., A., I, 540.

Masamune, H., biochemistry of carbohydrates. XXV. Detoxication of ingested naphthalene and excretion of [conjugate with] uronic acid, A., III,

and Hoshino, S., biochemistry of carbohydrates. XX. Prosthetic group of ovomucoid, A., III, 92.

Masayama, T., and Tatematsu, K. [with Nogi, K., and Yoneda, A.], state of vitamin-C in animal tissues, A., III, 44.

Mascarelli, L., diphenyl and its derivatives. XV. Passage from the diphenyl to the fluorene system, A., II, 185. Medicinal and aromatic plants of Sardinia and their active principles, B., 86.

Mascherpa, P., action of morphine on respiration of Saccharomyces ellip-soideus in absence or presence of extract of thymus gland, A., III, 33.

and Lusignani, G., combined action of sodium fluoride and vitamin-D on some bone constituents, A., III, 176,

Masohinenfabrik Augsburg Nürnberg Akt.-Ges., dry gas-holders [with concertinalike walls], (P.), B., 1015.

Maschinenfabrik Beth Akt.-Ges., bag filters for air and [other] gases, (P.), B., 635. Maschmeijer, A. J. H., Takens, E., and

Maschmeijer, Inc., A., jun., methyl ether of tert.-butyl-m-cresol, (P.), B., 651.

Maschmeijer, Inc., A., jun. See Maschmeijer, A. J. H.

Mascré, M., lucænol, a definite principle extracted from seeds of Lucana glauca, Benth, A., II, 296.

and Paris, R., constitution of the scoparoside (scoparin) of Sarothamnus scoparius, Koch, A., II, 347. Scoparin (scoparoside) from Sarothamnus scoparius, Koch, A., III, 333.

Masera, E., $p_{\rm H}$ of media for mould culture, A., III, 34.

Masing, G., reactions in solid metals, B., 247.

Masing, G., and Laue, G., protracted change with time of cathodic over-voltage on platinum, A., I, 85.

Masino, C., [constituents of] Pinguicula vulgaris, L., A., III, 19I. Diacolation, B., 854.

and Rognone, M., fluid extract of Cratagus oxyacanthia and Prunus spinosa, B., 618.

Masior, S. See Tychowski, A.

Masiyama, Y., hysteresis of magnetostriction for alloys of the systems ironnickel, nickel-cobalt, and iron-cobalt, A., I, 449. Hysteresis of magnetostriction of iron, nickel, cobalt, and single crystals of iron, A., I, 449.

Maslennikov, S. P. See Skvortzov, A. A. Masliev, I. T., and Rogov, N. A., feeding castor cake to poultry, B., 390.

Maslova, M. S. See Roshdestvenski, M. S. Mason, C. M., and Doe, R. M., determination of the thermal conductivity of

gases, A., I, 377.

Mason, C. W. See Jones, F. T., and Rochow, T. G.

Mason, H. C. See Fulton, R. A., and Howard, N. F.

Mason, H. H., and Turner, M. E., chronic galactæmia: carbohydrate studies, A., III, 13.

Mason, H. L., Hoehn, W. N., McKenzie, B. F., and Kendall, E. C., adrenal cortex. III. Structures of compounds A, B, and H, A., II, 459.

Myers, C. S., and Kendall, E. C., adrenal cortex. II. Identification of a substance having the qualitative action of cortin; its conversion into a diketone closely related to androstenedione, A., II, 25.

Mason. J. B. M., preparation and marketing of coal, B., 1292.

Mason, J. H., lethal dose of toxins of some anaerobes for sheep, A., III, 275.

and Robinson, E. M., antigenie components of the toxins of Cl. botulinum types C and D, A., III, 250.

Mason, K. E., feetal death, prolonged gestation, and difficult parturition in the rat as a result of vitamin-A deficiency, A., III, 493.

and Melampy, R. M., absence of vitamin-E from the royal jelly of bees,

A., III, 189.

Mason, L. S., and Washburn, E: R., ternary system methyl alcohol, toluene,

and water, A., I, 617.

Mason, M., use of mica in paints, B., 1238. Mason, M. F., Blalock, A., and Harrison, T. R., direct determination of renal blood flow and renal oxygen consumption of the unanæsthetised dog, A., III. 380.

and Evers, R., proteolytic activity of the sera of dogs with experimental uramia, A., III, 380.

Evers, R., and Blalock, A., renal oxygen utilisation of dogs with experimental hypertension, A., III, 420.

Resnik, H., jun., Minot, A. S., Rainey, J., Pilcher, C., and Harrison, T. R., mechanism of experimental uramia, A., III, 380. om 18 ods.

See also Blalock, A. Mason, R. Burgess, and Kilpatrick, M. relative acid strengths in normal butyl alcohol, A., I, 241.

Mason, Ralph B., and Taylor, C.S., explosion of aluminium powder dust clouds, A., $^{\circ}$ m I,417. The second contrast $^{\circ}$ $^{\circ}$ $^{\circ}$

Mason, Ralph B. Sco also Aluminum Co. of America.

Mason, R. C., thermocouple, A., I, 534.
Mason, R. T. G., apparatus for screening

materials, (P.), B., 510.

Mason, S., Loomis, R. J., Patterson, S. D., Nevitt, H. G., and Krchma, L. C., physical properties of asphalt; viscositytemperature susceptibility, B., 406.

Mason, T. G. See Phillis, E. Mason, W. H., Westphalen, C. H., and Masonite Corp., pressure-inversion process of making hard board products, (P.), B., 772.

Mason & Sons, Ltd., E. N., and Norman, D. J., ferroprussiate printing papers, (P.), B., 732.

Masonite Corporation. See Mason, W. H. Massa, F., determination of amino-nitrogen and glutamic acid-nitrogen in molasses, B., 174. Determination of amino-nitrogen and glutimic acid-nitrogen in molasses, B., 605. Causes of corrosion of iron tubes in sugar factory evaporators, B., 605.

Massachusetts Institute of Technology. See Norton, C. L.

Massagrande, B. See Montoro, V.

Massara, (Signa.) G., action of hydrogen bromide on benzaldehyde and methyl ethyl ketone, A., II, 502.

Massart, L. See Libbrecht, W. Massatsch, C., and Schneider, E., alterations in coffee fat with different intensities of roasting, B., 184.

and Steudel, II., utility of hardened fats in human metabolism, A., III, 19.

Massé, A., is water containing sodium chloride suitable for watering cattle? B., 826.

and Leroy, A. M., rapid determination of total nitrogenous material in milk for use of milk inspectors, B., 833111.

Massee, A. M., Greenslade, R. M., and Brair, J. H., impregnation of tree-banding materials. III. Apple-blossom weevil and codling-moth experiments in 1936, B., 824.

Massengale, O. N., and Bills, C. E., assay of vitamin-D with chickens, A., III, 406.

See also Bills, C. E.

Massey, E. E. See Allen, C. F. H.

Massey, H. S. W., and Mohr, C. B. O., interaction of light nuclei. III. Binding energies of ⁴He, ⁶He, ⁶Li, and of nuclei of the type 4n, A., I, 7.

Massey, L. M., injury [to roses] from spray materials, B., 712.

Massey, P. J., and Consolidated Water Power & Paper Co., drying of coated flexible webs, (P.), B., 509.

Massey, R. E., [report of] section of botany and plant pathology; root rot of cotton, B., 171.

Massey-Harris Co., Ltd. See Shenstone,

Masson, I., organic and inorganic chemistry of iodine oxides, A., II, 140.

and Race, E., direct conversion of iodic acid and aromatic hydrocarbons into iodonium compounds, A., II, 490.

Massot, A., and Lestra, H., determination of chloride in milk, A., III, 169.

Mast, S. O., and Pace, D. M., effect of silicon on growth and respiration in Chilomonas paramecium, A., III, 485.

Mastagli, P., reducing and condensing action of alkali benzyloxides on ketones, aldehydes, and aβ-unsaturated alcohols, A., II, 415. Mastagli, P. See also Palfray, L. Masterman, S. See Cowdrey, W. A., and Hughes, E. D.

Masterman, T. L. See Nat. Aniline & Chem. Co.

Masuch, V. See Juilfs, J.

Masuda, Kosaku. See Katagiri, H. Masuda, Kuro, reducing action of amalgams. IV., A., I, 628.

Masumjan, V. J. See Likushin, K. P. Mat, J. See Rosen, B.

Matagrin, A., ferrous metals and corrosion in chemical industries. V. and VI. Corrosion-resistant special cast iron. III. Silicon special cast iron. IV. Special cast iron containing nickel, B., 559.

Matano, C., intensity distribution in Debye rings due to various fibre structures. I. General theory. II. Spiral fibro structures of cellulose and fibroin fibres, A., I, 118.

and Ozawa, T., effect of orientation of the micelles on various properties of the fibroin fibre. I. Mechanical properties. II. Sorption and allied phenomena, B., 1033.

Matejka, E. A., planned material economy in steel production, B., 678.

Matejka, J., tests for firing of tiles, B., 241. Estimation of efflorescence on ceramic products [bricks], B., 1341. Mater, H. L. van. See Schneider, Frank.

Mather, R. C. See Mather & Platt, Ltd. Mather, W. B., geology and paragenesis of gold ores of the Howcy Mine, Red Lake, Ontario, A., I, 384. Mather, W. H. See Krebs, F. T.

Mather & Platt, Ltd., Jones, Q. R., and Hudson, W., strainers or filters [for coke]. (P.), B., 518.

and Mather, R. C., [apparatus for] wet treatment of [crôpe] fabrics, (P.), B.,

Mathesius, W., titanium steel, (P.), B., 456. Matheson, A. D. See Dorrance, R. L. Matheson, H. See Smith, E. R.

Matheson, K. J. See Saunders, G. P.
Mathews, F. P., toxicity of broomweed
(Gutierrezia microcephala) for cattle, sheep, and goats, A., III, 426.

Mathews, J. A., Curl, A. C., and Osborn, R. A., [determination of] selenium, A.,

Mathews, O. R. See Black, W. H. Mathewson, C. H. See Mertz, J. C.

Mathias, E., curvature of the density diameter, A., I, 354. Crommelin, C. A., and Meihuizen, J. J.,

density curve and rectilinear diameter of krypton, A., I, 231.

Mathias, H. R., effect of oil fogging on gum deposits and naphthalene, B., Ĭ10.

Mathiesen, I., and Wrigge, F. W., specific formation of solid hydrogen phosphide,

A., I, 372. Mathieson Alkali Works, chlorine dioxide, (P.), B., 344. Hydrogen peroxide, (P.), B., 668.

See also Cunningham, G. L., Day, G. G.,

Glenn, C. S., Logan, J. O., MacMullin, R. B., Savell, W. L., Sonle, E. C., Vincent, G. P., and White, J. F.Mathieu, F., calcium and phosphorus con-

tent of milk of dogs suffering from hypoparathyroidism, A., III, 187. Influence of œstrus, pregnancy, and lactation on the development of tetany and on the blood-calcium in dogs with hypopara-thyroidism, A., III, 187. Mathieu, F., experimental parathyroid insufficiency. I. Mineral constituents of dog's serum in acute and latent tetany. II. Adsorbable fraction of serum-calcium in acute and chronic parathyroid insufficiency. III. Effect of insulin on bloodcalcium of the normal dog and in latent

tetany, A., III, 363.

Mathieu, J. P., Werner complexes; transformations of cis-[Co en₂Cl₂Cl and cis-[Co en₂Cl(H₂O)]Cl₂ in aqueous solution; structure and reactivity of chlorinated compounds; Raman spectrum of four- and six-coordinate compounds; substitutions in optically active chlorinated complexes; Raman spectra of complex ions of the type

[MX₃), A., I, 42, 219, 322, 394. and Perrichet, J., optical properties of halogenated derivatives of camphor,

A., I, 285.

See also Freymann, (Mme.) M. Mathieu, M. See Fonrnier, G.

Mathieu, (Mllc.) S. See Chevalier, Ray-

Mathing, W. See Stock, A., and Wiberg, E.

Mathur, L. S., determination of latent heats of vaporisation of the selenides of cadmium and mercury and zinc telluride from absorption spectra of their vapours, A., I, 505. Absorption spectra of monosulphides of alkaline-earth elements and their latent heats of vaporisation, A., I.

Mathur, P. B. See Singh, B. N.

Matjuk, I. S., utilisation of the larch tree in the U.S.S.R., B., 443.

Matoba, S., carbon-oxygen equilibrium in molten steel, A., I, 307.

Matossi, F., and Bluschke, H., reflecting power of H₂O, HDO, and D₂O in the infra-red spectrum, A., I, 218.

Matschak, H. See Kegel, K. Matschkarin, V. L., bulb for combustion of gases for their analysis, A., I, 333.

Matsoura, T. See Ishikawa, S.

Matsubara, T., constitution of cerberin, A., II, 513.

Matsuda, K., change in shape of melanophores in frog skin. II. Influence of adrenaline and histamine on extension of melanophores produced by posterior pituitary extract. III. Influence of cocaine and related drugs, A., III,

Matsuda, R., Konya, H., and Nishimori, T., electrolytic formation of persulphate. IV. Influence of temperature, A., I,

and Nishimori, T., electrolytic formation of persulphate. II. and III., A., I, 37,

Matsuhashi, M. See Ishikawa, S. Matsui, A. See Ogawa, Toru ร์ เรศเกตราชสิน

Matsui, J., effect of acid-alcohol or acetone extracts of thyroid gland on nitrogen metabolism. I. Normal white rats. II. Hyperthyroid rats, A., III, 24. Action of epithelial cellular and colloidal material of the thyroid gland. III. Effect on blood-sugar, adrenaline and insulin-blood-sugar. IV. Influence on protein

metabolism of normal white rats, A., III, 42. Matsui, M., rapid determination of sulphur in pyrites cinder, B., 778.

and Kitazato, S., specific heat of sodium carbonate by twin calorimeter, A., I, Matsui, M., and Kiyoura, R., contact sulphuric acid manufacture. VI. Dispersion degree of vanadium oxide on the carrier. VII. Size of the carrier, B., 776.

Kuroda, Z., and Yumen, R., platinum resistance thermometry. IV. Deter-mination of constants in Van Dusen's

equation, A., I, 151.

Oda, K., and Fujino, J., chamber [sulphuric acid] process. XXV. Continuous-reading device for the nitrosity of "nitrose" in the sulphuric acid industry, B., 776.

Oda, K., Naka, T., and Kojima, T., contact sulphuric acid manufacture. V. Promoters, B., 776.

Matsukawa, T. See Akai, S.
Matsumoto, N., fibrous arrangements of the micro-crystals of some substances, A., I, 603. Variation of micellar orientation of viscose rayons according to different conditions of spinning and after-treatment, B., 1320.

Matsumoto, T., and Somazawa, K., immunology of mosaic diseases. IV. Effects of acetone, lead subacetate, barium hydroxide, aluminium hydroxide, trypsin, and soils on the antigenic property of tobacco mosaic juice, A., III, 71.

Matsumoto, Tsutomu. See Saegusa, Hikoo. Matsunaga, Y., X-ray investigation of sericin, A., I, 118. Change of lattice constants of fibroin by perfect drying, A., I, 604.

Matsuno, K., and Han, K., Raman effect of organic substances. VIII. Furan derivatives, A., I, 395.

Matsuo, I., secretion of dyestuffs by the stomach, A., III, 24.

Matsuoka, M., effect of sugars, starch, and yeast on growth of albino rats, A., III, 91. Matsuoka, T., vitamin-C. XVIII. Effect of light in its production, A., III, 79. Enzymic action in the digestive canal. I. Human and horse saliva. II. Saliva

of animals, A., III, 458.

Matsuoka, Y., "bound" sugar of blood. III. Influence of pancreatic and adrenal

functions, A., III, 84.

Matsushita, K., "funasushi"; pickling of
crucian in boiled rice. I. II. Isolation of lactic acid bacteria from "funasushi," B., 1120, 1398.

Matsushita, Y. See Sakurada, I. Matsuura, Akira. See Itano, A. Matsuura, Akiyoshi. See Inoue, R.

Matsuura, T., and Kashimura, A., influence of amino-acids and choline on pigmentexercting function of the liver, A., III, 177. See also Mizuta, N.

Mattauch, J., double-focussing mass spectrograph and masses of 15N and 18O, A., I, 57. The ⁸⁷Rb-⁸⁷Sr pair and the isobar rule, A., I, 210. Packing fractions of ⁸⁶Sr and ⁸⁷Sr by the doublet method, A., I, 210. Mass-spectrograph determination of nuclear binding energies, A., I, 223. Mattausch, J. See Brass, K.

Mattekovich, R. von, heat loss due to methane, etc., in waste flue gases, B., 1112.

Matthaiaki, E. See Ananiades, B.

Matthews, F. J., [coal] ash and clinker troubles, B., 102. Rôle of moisture in a

boiler furnace, B., 851.
Matthews, H. P., "flouring" of mercury as end-point in potassium permanganate titration of impurities in mercury, A., I,

Matthews, I., zinc sulphate treatment for mottle leaf of citrus trees in the Sundays

River valley, B., 825.

Matthews, (Miss) J. W., Holt, P. F.,
Sanderson, (Miss) P. M., and Briscoe, H. V. A., porous solid filters for sampling industrial dusts, B., 2. See also Briscoe, H. V. A.

Matthews & Yates, Ltd., and Yates, W., [panels for] air filters, (P.), B., 1291.

Matthiessen, G., determination of urinary lactic acid, A., III, 121.

Matthijsen, H.L., abrasion and accelerated weathering tests with various paints, B.,

Matti, J. See Fourneau, E.

Mattick, A. T. R., applied bacteriology in dairying, B., 612.

See also Davies, W. L., and Davis, J. G.Mattikow, M. See Thurman, B. H.
Mattill, H. A. See Olcott, H. S.
Matting, A., construction and use of

welding machines, B., 146. Surface treatment by welding technique for prevention of corrosion, B., 575.

Mattison, E. L. See Du Pont de Nemours & Co., E. I.

Mattson, S., and Gustafsson, Y., laws of soil colloidal behaviour. XVIII. Col-loidal electrolytes. XIX. Gel and sol complex in soil formation, B., 1096.

and Hou, K. C., laws of soil colloidal behaviour. XX. Neutral salt effect and the amphoteric point of soils, B., 1249.

Matuschka, B., and Cless, F., alloys for production of special steels, B., 46.

Matuszak, M. P., and Fisher Scientific Co., gas-analysis apparatus, (P.), B., 6.

and Frey, F. E., separating butenes from butanes; distillation of azeotropic mixtures with sulphur dioxide, A., II, 173.

Matuszewski, T., and Pijanowski, E., rôle of oxygen in decolorisation of methylene-blue by bacteria of the Streptococcus lactis group in sterilised milk, B., 179.

See also Pijanowski, E. Matuzuka, K., properties of moulding sands of Nippon and Manchoukuo, B., 782.

Matveev, K. I., spectrum analysis of alloy steels, B., 1062.

Matveev, K. K., occurrence of nickel in the biotite shales of the Ural emerald mines and of other emerald deposits, A., I, 334.

Matveev, N., ash content of linseed-oil cake, B., 58.

Matveev, N. I., reduction of pure cassiterite in a stream of hydrogen, and the application of this method to determination of tin in ores, B., 570.

Matveev, V. See Tartakovski, M. Matveev, V. J. See Ushastkina, Z. V. Matveev, V. K., nitroso- and bromo-

phenylpyriminazole, A., II, 262. Preparation of 2-phenylpyriminazole, A., II, 263.

Matveeva, M. S. See Stepanov, D. V. Matveitschuk, I. P. See Schischkin, V. V. Matzka, W., preservation of liquids. (P.), B., 634.

Matzko, S. N., enrichment of margarine with vitamins. II. Enrichment with vitamin-A by means of carotene preparations, B., 181.

Matzner, E. See Schüller, H.

Matzurevitsch, T., oil of Asclepius cornuti

seeds, B., 585.

Man, J. See under Lehmann & Voss & Co. Maude, A. H., gas-tight laboratory stirring device for pasty materials, A., I, 333.

Mauersberger, E. A., wetting, washing, dispersing, and like agents, (P.), B., 417. Water-soluble sulphonated condensation products, (P.), B., 529. Theobromine, (P.), B., 621.

Mauksch, W., and Budiloff, N., wear-

testing of eloxal films, B., 1357.

Maul, H. See Henglein, F. A. Maume, L., and Bouat, A., influence of

variety and soil on assimilation of sulphur by wheat, B., 1386.

and Dulac, $J_{\cdot,\cdot}$, rational sampling of wheat plants with a view of comparing their chemical analyses, B., 709. Degree of accuracy of sampling wheat plants at definite physiological times, B., 709. See also Lagatu, H.

Mauras, H., determination of solubility coefficients of naphthalene vapour in tetrahydronaphthalene and in gas oil, A., I, 128.

Maurel, A. See André, E. Maurer, E., heat conductivity of chromium steels at high temperatures, B., 351.

Maurer, Ed., and Storck, A., rotting of composts in silos and in heaps, B., 1385. Maurer, F. A., cleaning [metals] before

plating, B., 930.

Maurer, F. W. See Fenn, W. O.

Maurer, K., and Schiedt, B., [with Schroeter, H., and Plessing, H.], derivatives of glucazidone, A., II,

and Starck, H., spiran derivative of the quinoline series, A., II, 522.

Maurer, W., excitation of light by collision between cesium ions and helium atoms, A., I, 54. Excitation of light by impact between lithium ions and helium atoms: conservation of spin, A., I, 207.

and Mehnert, K., effective cross-section for excitation of the Na-D lines by impact of sodium ions on helium, A., I, 539.

Mauritz, B., and Harwood, H. F., basaltic rocks from the Tátika hills, Hungary, A.,

Mauritz, F. E. See Whitehead, J. B. Maurmann, G. See Süchting, H.

Mauthner, F., tetrahydroxybenzenes, A., II, 98. Syntheses of o-homoveratraldehyde and a new method of preparing overatraldehyde, A., II, 195. Synthesis of 3-iodoveratrole, A., II, 495. Preparation of 2-hydroxy-5-methoxyaceto-

phenone, A., II, 504.

Mautner, S., correlation between yield of Aspergillus and nutrient content of soil, B., 1101.

Mauve, L. See Rieke, R.

Maverick, G. M. See Standard Oil Development Co.

Mawson, C. A., hexose diphosphate metabolism of normal tissue extracts, A., III, 384.

See also Fraenkel, E. M.

Mawson, M. E. H. See Best, C. H.

Maxia, C., photo-counters in the study of chemi- and bio-luminescence: Gurvitsch effect, A., I, 152.

Maxim, M. S., apparatus for burning sulphur, (P.), B., 239.
Maxim, N., and Copuzeanu, I., furan

ketones with several double linkings and ethylenic ketones with a pyrrole nucleus, A., II, 302.

Maxim, N., and Georgescu, (Mlle.) E., interaction of mixed organomagnesium compounds with ethyl B-furylacrylate, A., II, 298.

and Popescu, (Mlle.) M., action of mixed organomagnesium compounds on furyl ketones with two conjugated double

linkings, A., II, 385.

Maximenko, B. N. See Ivanov, B. I.,

and Sheleznov, A.I.Maximenko, M.S., and Izrailovitsch, J.I., equilibrium in the system calcium cyanamide-sodium chloride, A., I, 243.

Maximoff, A. T., and Azodal Co., modifications of 2:4-diaminoazobenzene hydrochloride [bactericide], (P.), B., 1135.

 $\begin{array}{lll} \text{Maximov, O. B.} & \text{See Belopolski, M. P.} \\ \text{Maximov, V. I.} & \text{See Magidson, O. J.} \\ \text{Maxson, W. L.} & \text{See Bond, F. C.} \end{array}$

Maxted, E. B., and Evans, H. C., catalytic toxicity and chemical structure. Relative toxicity of sulphur compounds in catalytic hydrogenation. II. Influence of chain length in the alkyl sulphide and

thiol series, A., I, 316, 418. Maxwell, H. N. See Green, J. B. Maxwell, L. C. See Bischoff, F.

Maxwell, L. R., Hendricks, S. B., and Deming, (Miss) L. S., molecular structure of P₄O₅, P₄O₆, P₄O₁₀, and As₄O₅ by electron diffraction, A., I, 502.

See also Rollier, M. A.

Maxwell, R. D. See Coleman, G. H. Maxwell, W. R., and Partington, J. R., dissociation constants of polybasic acids. III., A., I, 306.

May, A., lattice energies and transition temperatures of cæsium chloride and ammonium chloride, A., I, 552.

See also Braun, J. von., and Goeppert-Mayer, M.G.May, E.M. See Kharasch, M.S.

May, F., and Stübler, R., structure of animal and plant cellulose. II. Investigation by X-rays, A., III, 7.

May, G. S., preserving, waterproofing, and fireproofing stone, brick, wood, and similar work, (P.), B., 41.

May, J., utility of the Zeiss gas interfero-

meter [with special von Löwe chamber] for determining impurities in air, B., 1281.

May, K., crystal structure of rubidium

sulphide, Rb_2S , A., I, 16. May, L. E. See Todd, J. D. May, M. B. See Pratt, W. B.

May, M. M., thyroid and adrenal glands during experimental scurvy and vitamin-C treatment, A., III, 364.

May, O. E. See Lockwood, L. B., Moyer,

A. J., and Wells, P. A.May, R. See Kraft, K.

May, W. See Braun, J. von.

May & Baker, Ltd., and Ewins, A. J., organic arsenic compounds, (P.), B., 1136.

Mayeda, S. See Asahina, Y. Mayer, A. (Prag). See Heller, K. Mayer, A. (Wien). See Schwarz, C.

Mayer, E. E., paraffin wax emulsions, (P.), B., 1015. Sizing of paper and similar materials, (P.), B., 1038.

Mayer, G. See Prandt, W.

Mayer, Helene. See Popper, H. Mayer, Herbert, photo-electric properties of potassium films of atomic thickness on platinum. I., A., I, 337. Ionisation of potassium atoms at heated platinum and tungsten surfaces, A., I, 387.

Mayer, H. T., evaporation of lacquers, B.,

Mayer, J. See Karrer, P.

Mayer, K., and Wibaut, J. P., reaction between nickel carbonyl and thiocarbonyl chloride and the supposed polymeric carbon monosulphide of Dewar, A., I, 322. Preparation of nickel tetracarbonyl, A., I, 322.

Mayer, K. H. See Grube, G. Mayer, L., plating of [metal] sheets, B.,

Mayer, L. L., Hale, R. M., and Minerals Separation North American Corp., [froth-] flotation separation apparatus, (P.), B.,

Mayer, M. See Blumenfeld, J.

Mayer, (Mme.) N., oxidation-reduction potential of reductic acid, A., I, 140, 246.

Mayer, R. L., and Oechslin, C., anti-streptocoecal substances; activity and toxicity of substances derived from benzenesulphonamide, A., III, 434.

Mayer-Pitsch, E. See Bilger, F., Fruhwirth, O., and Pestemer, M.

Mayers, M. A., factors affecting combustion in fuel beds, B., 312.

See also Sebastian, J. J. S.

Mayfield, H. L. See Richardson, J. E.

Maymone, B., and Giustozzi, D., nutritional value of virgin olive pulp as feed for milch cows, B., 725.

Marracino, R., and Carusi, A., chemical composition, digestibility, and nutritive value of juniper berry cakes (Juniperus communis, L.), A., III, 243.

Maynard, L. A. See Dahlberg, A. C., Ellis, \hat{G} ., and Miller, J. I.

Mayne, J. E. O., effect of fibre cores on internal corrosion in colliery winding

ropes, B., 789.
Mayneord, W. V., and Roe, E. M. F., ultra-violet absorption spectra of some complex aromatic hydrocarbons. II., A., Î, 280.

Mayo, C. G. See Brit. Thomson-Houston

Mayo, F. R., reduction of the pyridine ring by formic acid, A., II, 208. See also Kharasch, M. S.

Mayor, J., preparation, by melting, of moulded bodies of a difficultly fusible alloy, (P.), B., 457.

Mayor, Y., identification and determination

of thymol and carvacrol, A., II, 145. Butadiene, B., 521. Synthetic phenol, B., 523. Pine-needle oil, B., 941. Synthetic camphor, B., 1018.

Mayoral, J. E., and Driver-Harris Co., insulation of [nickel-chromium] wires, (P.), B., 691.

Mayr, F. See Diemair, W.

Mayrhofer, G., pipette without graduated scale for automatic delivery of definite quantities of liquid and adapted to be filled by immersion, (P.), B., 636.

Maywald, F. J., and Kunz, E. C., treatment

of rubber, (P.), B., 1246. Mayzer, M. S. See Markush, E. A.

Mazars, H. See Jaulmes, P.

Mazé, P., invisible parasite of lactic bacteria. A., III, 35. Bacteriophages of the lactic bacteria of milk, A., III, 318. and Mazé, P. J., absorption by roots. A., III, 80. Mazé, P. J. See Mazé, P.

Mazee, W. M., dielectric constants of dilute solutions of salts, A., I, 78.

Mazel, V. A., combined alkaline method for production of alumina, B., 340.

Mazer, C., and Israel, S. L., optimal dosage of costrogens; experimental and clinical evaluation, A., III, 185.
Mazoński, T., Mieleoki, T., and Sucharda,

E., reactions of o- and p-nitrotoluene and o-nitrophenol with glycerol and hydrochloric acid, A., II, 166. See also Sucharda, E.

Mazur, A., sulphur distribution and basic amino-acids of hæmocyanin from Limulus, A., III, 248.

See also Harrow, B.

Mazzarola, A. H. See Lawroski, S. Mazzeo, H., machine for manufacture of [moulded] rubber products [for foot-

wear, etc.], (P.), B., 374.
Mead, F. B. See Dragstedt, C. A.
Mead, J. C. See Cudworth, J. R. Mead, T. H. See Clutton, R. F.

Mead Corporation, and Growdon, L. R., paper, (P.), B., 230.

Hochwalt, C. A., and Reboulet, H. J.,

moulding compositions, (P.), B., 468. and Reboulet, H. J., non-cellulosic organic material derived from the black liquor resulting from the pulping treatment of wood or other fibrous material, (P.), B., 431.

Mead Research Engineering Co. Hochwalt, C. A.

Means, E. A., and Newman, E. L., carbon monoxide analyser, B., 133.

Meanwell, L. J., raw milk supplies for pasteurisation, B., 179.

See also Anderson, E. B.

Meara, M. L. See Malkin, T. Mears, R. B., and Brown, R. H., corrosion probability, B., 1357. See also Dix, E. H.

Mears, W. H. See Harkness, J. B.

Mease, R. See Harris, M. Mecham, D. K. See Blish, M. J., and Sandstedt, R. M.

Mecheels, O., substantivity of some textile assistants, B., 538

Mechling, G. S., cyclopropane: a new gas anæsthetic, A., III, 217.

Meckbach, H. See Schwarz, Robert.

Mecke, P., testing of protective (bituminous) paints, B., 1238.

Mecke, R., calculation of characteristic frequencies of polyatomic molecules, A., I, 66. Chain vibrations of isomeric paraffins and their identification in the Raman spectrum, A., I, 549. and Baldwin, W. C. G., why do leaves

appear bright in infra-red light? A., III, 286.

and Semerano, G., action of red and infra-red sensitisers, B., 394.

and Zobel, A., sensitisation and hypersensitisation of infra-red [photographic] plates, B., 622.

Médard, L., and Déguillon, F., Raman effect of organic sulphur compounds, A., I, 113.

Medes, G., metabolism of sulphur. III. Excretion of cystine by normal individuals. VI. Oxidation in the body of the sulphur-containing aminoacids and some of their partially oxidised derivatives, A., ÎII, 92, 383.

See also Sterner, J. H.

Medico Chemical Corporation of America, and Ostromislensky, I. I., chemically 4:4'-di-I-phenyl-3-methyl-5-pyrazolonyl, (P.), B., 290.

Medinski, C. B., and Kostrov, I. V., determination of organic halogen compounds in presence of free sulphur, A., II, 436.

Medlar, E. M., megakaryocytes in circulating blood of rabbits inoculated with benzene and with saponin, A., III, 215.

See also Blatherwick, N. R.

Medvedev, G., enzyme-substrate compounds in enzymic reactions, A., III, 268. Energy of activation and temperature constants of enzymic reactions, A., III, 268. Kinetic theory of invertase action, A., III, 269.

and Schelaumova, A., use of the nephelometer in investigations on yeast, A., III, 98.

and Vissotzkaja, N. S., biocatalysts of yeast, A., III, 395.

Medvedev, J. V., temperature coefficient of velocity of alcoholic fermentation, A., III, 355.

Medvedev, N. N., artificial mutations under the combined influence of X-rays and salts of heavy metals in Drosophila melanogaster, A., III, 423.

Medvedev, S., kinetics and mechanism of polymerisation processes, A., II, 438.

Medvedeva, A. See Vesely, V. Medvedeva, N. B., autocatalytic stimul-

ation of functions of the lungs, A., III, 22. Medvedeva, S., toxins of Fusarium bucharicum, Jacz, and F. graminearum, Schw., A., III, 396.

Medvedkov, E. S. See Glikman, S. A. Mechanite Metal Corporation, treatment of molten metal for casting, (P.), B., 935.

Meek, C. A. See Emeléus, K. G., and Lunt, R. W.

Meek, H. O., and Salvin, F. G., determination of volatile oil in drugs, B., 1134.

Meek, S. F. See Harrold, G. C.
Meeraus, W., and Lorber, G., chemical
changes in smooth muscle. II. Glyco-Iysis in smooth muscle of hens' stomach, Å., III, 471.

Meerburg, (Frl.) W. See Verkade, P. E. Meerscheidt-Hüllessem, von, modified Bergmann-Junk-Mayrhofer stability test for smokeless powder, B., 1279. Stability test for smokeless powder, based on a determination of volume at constant pressure and temperature of gases evolved on decomposition, B., 1280.

Meersseman, F., titration of the alexic power of human sera, A., III, 166.

Dorche, J., Joët, E., and Duron, P., experimental hepatic insufficiency; ammonia and amino-acids in urine during toxic hepatitis in guinea-pigs, A., III, 89.

and Perrot, H., alexic power of normal and pathological sera, A., III, 166.

Meerwein, H. [with Bock, B. von, Kirschnick, B., Lenz, W., and Migge, A.], reducing action of metal alkoxides. II., A., II, 83.

and Geschke, E., metal alkoxides and ortho-esters. II. Thermal decomposition of metal alkoxides and orthoesters, A., II, 83.

Hinz, G., Hofmann, P., Kroning, E., and Pfeil, E., tertiary oxonium salts. I., A., II, 46.

Hinz, G., Majert, H., and Sönke, H., reducing action of metal alkyls, especially of aluminium and boron alkyls, A., II, 91.

Meerwein, H., and Sönke, H., diethylborie acid, A., II, 91.

and Vorster, J., pinene hydrochloride, A., II, 26.

See also Karrer, P.

Mees, W. See Zwieg, W. Meggers, W. F., and Humphreys, C. J., interference measurements of wavelengths in the ultra-violet spectrum of iron, A., I, 385.

and Scribner, B. F., are and spark spectra of lutecium, A., I, 486.

Meggy, A. B., and Robinson, R., diene synthesis applicable to the sterol group, A., II, 456.

Megson, N. J. L., chemistry of phenolformaldehyde resins, B., 466.

See also Hartshorn, L., and Morgan, (Sir) G. T.

Mehl, E. See Thomas & Co., R.

Mehl, R. F., rates of diffusion in solid alloys, A., I, 296. Diffusion in solid metals B. 574 metals, B., 574.

and Derge, G., Widmanstätten structure. VIII. The γ- and α-transformation in iron-nickel alloys, A., I, 357.

and McCandless, E. L., oxide films on

iron, A., I, 288. and Smith, D. W., orientation of ferrite in pearlite, B., 1350.

and Wells, C., constitution of high-purity iron-carbon alloys, A., I, 558.

See also Barrett, C. S.

Mehlenbacher, V. C., fat and oil microscopy, B., 57. Characteristics of kapok oil, B., 807.

Mehler, E. See Hahn, A. Mehlig, J. P., spectrophotometric determination of iron in ores, B., 678.

Mehltretter, C. L., ionisation constants of some secondary amines in methanol, A., I, 616.

See also Levene, P. A.

Mehmel, M., water content of kaolinite, halloysite, and montmorillonite, A., I, 205. Alteration of biotite, A., I, 483. See also Correns, C. W.

Mehner, W., separation of gas as cause of the "filter effect," B., 196.

Mehnert, E. See Tomaschek, R. Mehnert, K. See Maurer, W.

Mehovar, J. See Körber, F.

Mehrle, R., limits of crystallisation in massecuite operation, B., 717.

Mehta, S. M., measurement of $p_{\rm H}$ by means of the glass electrode, A., I, 266. Measurement of surface tension, A., I. 268.

and Sheth, S. M., electrical conductivity of solutions containing sodium hydroxide and phosphoric acid, A., I, 189. $p_{
m H}$ of solutions containing sodium hydroxide and phosphoric acid, A., I,

Meidinger, IV., mass and distribution of photolytic silver in silver bromide-gelatin emulsions of different grain size. II. Mass and distribution of photolytic silver in photographic films containing nitrite, A., I, 626. Velocity of development of individual silver bromide grains, B., 189. Progress in photography since 1930, B., 981. Mass and distribution of photolytic silver in silver bromide-gelatin emulsion of different grain size. I., B.,

Meier, E., rust prevention, B., 44. Meigs, F. M. See Du Pont de Nemours & Co., E. I. Meigs, W. See Colbert, J. C.

Meihuizen, J. J., and Crommelin, C. A., vapour pressures of liquid krypton, A., I, 71.

See also Mathias, E. Meijer, T. M., approximate colorimetric determination of derris extract, B., 74.

Meiklejohn, A. See Sutherland, C. L. Meiklejohn, A. P., determination of vitamin- B_1 in blood by a modification of Schopfer's test, A., III, 405.

Meiklejohn, J. See Caldwell, J.

Meinel, K., possible detection of conjugated carbon double linkings, A., II, 173. Bromine reaction value as a fat constant, B., 256. Bromine-binding number and stand-oil boiling, B., 365.

Meinzer, G. H., removal of fluorino from potable waters, (P.), B., 850.

and California Consumers Corp., electrode system for producing solutions of [oligodynamic] metals, (P.), B., 693.

Meir, G. E., and Mellor, J. W., ferric oxide

colours, B., 345.

Meisel, K. See Biltz, W.

Meisenburg, K., Kükenthal, H., and Winthrop Chem. Co., insecticide and para-

siticide, (P.), B., 1256.

Meisenburg, S. J. See Boarts, R. M.

Meisener, A., dielectric material, (P.), B.,

Meissner, H. See Koblitz, W. Meissner, I., and Wöhlisch, E., action of hydrotropie substances on fibrinogen and blood-clotting, A., III, 453.

Meissner, J., continuous nitration of aromatic hydrocarbons, (P.), B., 22.

Meissner, K. W., and Ebbinghaus, E.,

sodium spectrum, A., 1, 435.
and Luft, K. F., hyperfine structure of the sodium D lines, A., I, 271. Magnetic nuclear moment of 39K, A., I, 435. Spectrum of Na I with high resolution and structure of the 2D terms, A., I, 435. and Weinmann, W., Bergmann series of

cæsium, A., I, 436.

Meissner, M. See Thompson, H. W. Meissner, W., change of electrical resistance of hardened platinum on tempering, A., I, 352. Meister, M. See Freudenberg, K.

Meitner, L., β - and γ -rays of trans-uranium, A., I. 338. Atomic nucleus and periodic system of the elements, A.,

Hahn, O., and Strassmann, F., transformation series from neutron irradiation of uranium, A., I, 440.

See also Hahn, O.

Meitzler, C. R. See Pieper, A. F.

Meixner, H. See Kuster, E.

Meixner, J., radiation damping and fine structure of the Balmer hydrogen line, A., I, 1.

Mejuto, M. N. See Calvet, F.

Méker, L. J., hypersensitisation of tricolour mosaic-screen films and regeneration of old or fogged emulsions, B., 89.

Mekler, L. A. See Universal Oil Products

Co.

Melampy, R. M. See Mason, K. E. Melberg, C. O., and Continental Oil Co.,

furnace for pyrolytic treatment of hydrocarbon oils, (P.), B., 754.

Melchior, O. See Kohlschütter, H. W.

Meldau, R., efficiency tests on dedusters, B., 96.

Meldrum, A. N., and Bamji, C. N., 6sulpho-m-cresotic acid and related compounds, A., II, 149.

Meldrum, A. N., and Shah, N. M., effect of temperature on solutions of sodium phosphate in presence of organic acids, A., 1, 189.

Melhuish, M., white metals and bronze bearings from manufacturers' point of view, B., 143.

Melichov, P. I., slag inclusions in steel, B.,

Melik-Megrabov, A. M., gaseous composition of blood during anaphylactic shock, A., II, 1.

Melik-Ogandjanoff, T. See Carnot, P.

Melin, C. G. See Scanlan, J. T. Mellanby, K., water and fat content of

tsetse flies, A., III, 252.

Mellander, A., velocity of bromination and racemisation of a-carboxyethyl alkyl sulphones, A., I, 35. Reaction mechanism in bromination of a-carboxyethyl alkyl sulphones, A., I, 35. Separation of dl-a-methylthiolpropionic acid into its optical antipodes, A., II, 322.

Mellen, H. L., grease-resistance of paper, B.,

Meller, H. B., and Rupert, F. F., physics of air hygiene, B., 1138.

Melling, E., coumarone resins, B., 589. Mellish, C. H., effects of anterior pituitary

extract and certain environment conditions on genital system of the horned lizard, A., III, 228.

Mellon, M. G., rôle of spectrophotometry in

colorimetry, A., I, 201.
See also Kasline, C. T., Swank, H. W., and Wright, E. R.

Mellon, R. R. See Locke, A.

Mellon Institute of Industrial Research. See Butler, C. L., Cretcher, L. H., and Souther, B. L.

Mellor, A. See Brit. Celanese. Mellor, D. P., Cohen, S. B., and Underwood, E. B., crystalline boron, A., I, 92.

and Quodling, F. M., optical properties and crystal structure of some compounds of type R_xMX₄, A., I, 173. Mellor, G. A. See Jenkins, C. H. M.

Mellor, J. E. M. See Petherbridge, F. R. Mellor, J. W., chemistry of copper-red glazes. H., B., 138. Retrospection, B., 345. Cultivation of crystals on glazes, B., 345. Chemistry of the chrome-tin colours, B., 345. Cobalt and nickel colours, B., 345. Discoloration of chrome-green colours, B., 345. Spontaneous rupture of aged pottery, B., 346. Molecular formulæ of clays and glazes, B., 1205. See also Meir, G. E.

Melnick, D., and Cowgill, G. R., protein minima for nitrogen equilibrium with different proteins, A., III, 467. Toxicity of high-gliadin diets on the dog and rat, A., III, 467.

Melnikov, N. N., aliphatic nitro-compounds. IV. Reactions of nitromethane halides with metal-organic compounds, A., II, 225.

and Gratscheva, G. P., reaction between thallium chloride and bromide and certain phenols, A., II, 240.

Kretov, A. E., and Meltzer, B. I., tetraarylphosphonium chlorides, A., II,

and Rokitskaja, M. S., reactions of mercury diethyl with certain acid chlorides, A., II, 226.

Meloche, V. IV., See Olson, E. Melon, J. See Cesàro, G. Meloni, O. See Dogliotti, G. C. Melsheimer, L. A., paint consistency, with particular reference to formulation with

lithopone. I., B., 810.
Melton, R. L. See Benner, R. C., and Carborundum Co.

Meltzer, B. I. See Melnikov, N. N. Meltzer, K., bleaching groundwood, with special reference to a new method, B.,

Melville, H. W., quantum yield of the photosensitised decomposition of water and of ammonia, A., I, 193.

and Bolland, J. L., mercury-photosensitised exchango reaction of deuterium and phosphine, A., I, 471.

Bolland, J. L., and Roxburgh, H. L., photochemical decomposition and oxidation of trideuterophosphine, A., 1, 471. See also Bolland, J. \hat{L} ., and Farkas, A.

Melville, J. See Williams, H. II.

Melville, K. I., effect of salt saturation on the urinary response to pituitary (posterior lobe) extract, A., III, 150.

Melville, R., influence of environment on growth and metabolism of the tomato plant. II. Relationship between water content and assimilation, A., III, 157.

Melzer, H., whiter ground enamel, B., 671. Melzer, W. Seo Kailan, A. Menadue, F. B., highly reactive sulphur or

the reaction of ammonia and sulphur chloride in rubber solutions, B., 1245.

Menchikowsky, F., and Puffeles, M., ratio of calcium and magnesium to potassium and sodium and chlorosis of grapefruit trees in the Jordan valley, B., 169.

Mendel, H. See Bertram, S. H.

Mendel, L. B., Hubbell, R. B., and Wakeman, A. J., influence of some commonly used salt mixtures on growth and bone development in albino rats, A., III, 472.

See also Horwitt, M. K., Hubbell, R. B.,

and Orten, J. M.
Mendel, T. H. See Israel, S. L.
Mendeléef, P., fractionation of guinea-pig's liposarcoma, A., III, 460. See also Havas, L.

Mendelssohn, K., superconductivity, A., I, 352.

and Daunt, J. G., superconductivity of lanthanum, A., I, 229. See also Daunt, J. G.

Mendelssohn, T., sensitometric testing

without a photometer, B., 845.

Mendenhall, C. E., and De Voe, C. F. photo-electric work functions of the 211 and 310 planes of tungsten, A., I, 209.

Mendenhall, D. R. See Elvehjem, C. A. Mendive, J. R. See Biasotti, A.

Mendlik, F., the Beha moisture-meter, A., I, 480.

Imperial Chem. See Mendoza, Industries.

Mendrzyk, H., defects in papermaking felts, B., 770.

Menefee, A. B. See Armstrong, H. H. Meneghetti, E., action of colloidal cupric oxide on hæmatopoietic tissue and accumulation of electropositive colloids in reticulo-endothelial elements, A., III, 264.

Menendez, P. See Gatti, C.

Mengeringhausen, $M_{\cdot \cdot}$, luting of cast-iron waste pipes with aluminium, B., 559.

Mengoli, V. See Pachioli, R. Menkin, V., isolation and properties of the factor responsible for increased capillary permeability in inflammation, A., III, 300.

Menkovski, M. A., Kiselgof, L. A., and Zacharova, V. N., determination of free sulphur and bitumens in commercial sulphur, B., 1046.

Mennicke, U. See Fritz, W. Mennicken, G. See Werle, E.

Menon, A. S., refraction of light by colloidal solutions. II. Sols of copper, cuprie hydroxide, and mercuric sulphide. III. α - and β -stannic acid sols, A., I, 182, 237.

Menon, B. K., synthetic experiments in naphthalene and phenanthrene series, A., II, 62.

Menon, T. M. See Joshi, S. S.

Menon, V. K. N., non-glucose reducing substances in blood. II. Vitamin-C fraction, A., III, 291.

Menough, P. S., heating furnace, (P.), B., 1287.

Menschikov, G., alkaloids of Heliotropium lasiocarpum and Trichodesma incanum, A., III, 333.

Losik, J., and Orekhov, A. P., oxidation of benzoylanabasine with potassium permanganate, A., II, 526.

Menschikova, T. M. See Gelgren, E. C. Menschutkin, B. N., historical development of the conception of chemical elements, A., I, 269.

Mentzer, C., determination of total ascorbic acid with methylene-blue, A., III,

aswin, A., Corteggiani, E., and Gautrelet, J., choling and acetylcholine Kaswin, in invertebrates; organs of Helix pomatia, A., III, 8.

and Vialard-Goudou, A., reduced ascorbic acid; determination by methyleneblue method, A., III, 327.

See also Corteggiani, E., and Gautrelet, J. Menzel, A. E. O. See Heidelberger, M.

Menzel, C.A., Portland cement as a binder for foundry moulding sand, B., 1217.

Menzel, D. H., theoretical interpretation of equivalent breadths of absorption lines, A., I, 158. Physical processes in gaseous nebulæ. I. Absorption and emission of radiation, A., I, 436.

and Cillié, G. G., hydrogen emission in the chromosphere, A., I, 336.

and Goldberg, L., multiplet strengths for transitions involving equivalent electrons, A., I, 104. Relative fvalues for lines of Fe I, A., I, 208.

Menzel, E., shaping or moulding of granular or pulverulent material under pressure, (P.), B., 1146.:

Menzel, H., and Hagen, W., alkali phosphates and arsenates. III. Tertiary sodium arsenates. IV. Secondary sodium arsenate, A., I, 412, 527.

and Sahr, E. von [with Hagen, W.] alkali phosphates and arsenates. II. Tertiary sodium phosphate, A., I, 185.

Menzel, K. C., improvement of nicotine

sprays, B., 74. Menzies, A. W. C. See Shearman, R. W., and West, W. A.

Menzies, R. C., and Walker, A. R. P., application of thallium compounds in organic chemistry. X. Influence of change of substituent on properties of chelate rings, A., II, 5.

Menzies, W. C., Blatch, F. H., and Wilmot Eng. Co., separating and washing apparatus, (P.), B., 4.

Meppen, B., and Scheel, K. C., determination of free acid and water in superphosphate, B., 1334.

Mercer, M., filler metal for oxy-acetylene welding, B., 930.

Mercier, A., theory of β-radioactivity, A., 1. 338.

Mercier, F., and Delphaut, J., toxicity of digitalin and ouabain administered suboccipitally, A., III, 95. and Macary, S., biological determination

of glucosides in Adonis vernalis, A., III, 138, 190. Mercier, H. See Siee, A.

Mercier, J., vacuum distillation of hydrogen peroxide and other easily decomposable liquids, (P.), B., 343.

Mercier, J. M., double bromide of iron and ammonium, A., I, 259.

Mercier, P. See Ramon, G. Mercier, R., and Scherrer, P., simple apparatus for demonstrating scattering of a-rays, A., I, 58.

Merck, E., compressed tablets for pharmaceutical and other purposes, (P.), B., 1136.

Merck, F. See under Merck, E. Merck, K. See under Merck, E.

Merck, L. See under Merck, E. Merck & Co., Inc. See Engels, W. H., and

Major, R. T. Merekel, J. H. C., extension of gelatin [jellies], A., I, 133. Relationships between m.p., b.p., and critical magnitudes and number of carbon atoms in homologous series, A., I, 231. Influence of $p_{\rm H}$ on properties of gelatin, A., I, 240. Quantitative regularities in homologous series, A., I, 406. Solubility of dicarboxylic

and Wiebenga, E. H., dilatation of gelatin under influence of salts, A., I, 564.

Merckens, O., drying of travelling webs, (P.), B., 509.

Merco Centrifugal Separator Co., Ltd., Peltzer, A., and Peltzer, A., jun., starch, (P.), B., 382.

Merdler, L. R. See Gilbert, A. H. Meredith, D. See Hall, T. D. Meredith, W. O. S. See Anderson, John

acids, A., I, 509.

Ansel.

Meres, M. W. See Muskat, M. Mereshinski, M. F., influence of C-avitaminosis on redox processes (studied by Thunberg's method) in muscle, after fatigue and training, A., III, 126.

Meretoja, A. See Kilpi, S. Merewether, E. R. A., health risks in the [metal-]finishing trades, B., 1413.

Merica, P. D., progress in improvements of cast iron and use of alloys in iron, B., 1212.

Mérigoux, R., movement of contaminated liquid surfaces, A., I, 26. See also Trillat, J. J.

Merklen, F. P. See Fiessinger, N.

Merlis, M. N., direct preparation of chemically pure (reagent) hydrochloric acid from sulphate oven gas,

and Petrov, O. D., rapid separate determination of nitrogen peroxide and nitric oxide in gases of tower-process sulphuric acid factories, B., 434.

Merrell Co., W. S. See Rider, T. H. Merriam, E. S., preformed abrasive article, (P.), B., 783.

Merriam, H. F. See Gen. Chemical Co. Merriam, O. A., and Fellers, C. R., composition and nutritive studies on blueberries [Vaccinium], B., 614.

Merriam, O. A. See also Mitchell, H. S. Merriam, R., and Laudermilk, J. D., diopsides from Southern California, A., I, 102.

Merrill, D. R. See Union Oil Co. of California.

Merrill, E. C. Sec McFarlan, R. L.

Merrill Co., Mills, L. D., and Crowe, T. B., treatment of cyanide solutions containing dissolved precious metals, (P.), B., 457.

Mills, L. D., Crowe, T. B., and Haun, J. C., treatment of alkaline cyanide solutions containing dissolved precious metals, (P.), B., 667.

See also Mills, L. D. Merrill Co., W. S. See Rider, T. H.

Merrimac Chemical Co. See Curtis, F. J., Healy, J. J., jun., Sargent, N. A., and White, J. F.

Merritt, H. H. See Putnam, T. J.

Merritt, J. R. See Gilfillan, F. A.

Merry, E. W. See Lloyd, (Miss) D. J.

Merry, J. S., boiler-water problems, B.,

1285.

Merten, O. See Reinhold, J. Mertens, E., Hellinckx, L., and De Hoffmann, C., butyryl derivative of Congo copal, A., II, 428. Hydrogenation of

Congo copal, B., 60. Mertens, O., cooling of salt solution in a cooling tower, B., 435.

Mertins, H. See Zipî, K.

Mertz, J. C., and Mathewson, C. H., solid solubility of elements of sub-group Vb

in copper, A. I., 298.

Mertzlin, R. V., systems with an upper critical triple point, A., I, 233.

Merwe, C. W. van der. See Bacon, R. H.

Merwin, B. W., cerium oxide and rareearth oxide mixture in glazes, B., 547.

Merwin, H. E., and Lombard, R. H., system copper-iron-sulphur; A., I, 413. and Posnjak, E., sulphate incrustations in the Copper Queen Mine, Bisbee, Arizona, A., I. 431. See also Morey, G. W.

Merz, A., absorption spectra of praseodymium salts and their Zeeman effect, A., I, 280.

Merz, A. R., and Fletcher, C. C., production and agricultural use of sodium

nitrate, B., 1043.

Merz, K. W., and Franck, R., chromatographic adsorption analysis in pharmacy. IV. Quantitative investigation of medical preparations containing alkaloids, B., 1133.

and Krebs, K. G., luganin. I., A., II,

and Richter, H., formation of pyridines from 1:5-[$a\epsilon$ -]diketones, A., II, 303.

Meschalkin, S. I., rapid indirect determination of sodium and potassium present together, A., I, 262.

Meshenni, J. P., electrochemical properties of the systems AlBr₃-MeNO₂, LiCl-AlBr₃-MeNO₂, KCl-AlBr₃-MeNO₂, A., I, 31. Electrochemical study of the systems alkali chlorides-aluminium bromide-nitrobenzene, A., I, 32.

Mesinger, W. F. See Linde Air Products Co.

Mesirow, R. J. See Freed, S.

Mesle, F. C., résumé of silver-plating, B.,

Mesnage, P., molecular emission spectra of metallic salts, A., I, 216, 442. Mesonshik, A. See Malkov, A.

Mesonshnik, S. S. See Korenman, I. M.

Mesrobeanu, L., and Boivin, A., toxins of the dysentery bacillus; thermostable toxic principles of the bacillus of Shiga, A., III, 116.

See also Boivin, A.

Messenger, T. H., and Dawson, T. R., distribution of grit in a case of compressed gas black, B., 699.

and Scott, J. R., tests on crêpe [rubber] soling. III. Water absorption, B., 160.

Messer, W. E. See Barnard, A. E. Messerly, G. H. See Aston, J. G.

Messina, S. C., and Fragoso, F. N. S., fluid-mixing cocks, (P.), B., 741.

Messini, M., blood-calcium level in relation to action of the thymus and of irradiated

ergosterol, A., III, 114. Mestern, H. E. See Kaufmann, H. P. Metal Finishing Research Corporation. See

Tanner, R. R.

Metallgesellschaft Akt.-Ges., raw rubber with a low content of non-rubber constituents, (P.), B., 67. Salts with a low water content or in the anhydrous condition, (P.), B., 238. Concentrating aqueous rubber and similar dispersions, (P.), B., 374. Discharge devices for shaft furnaces, (P.), B. 990. Rotary drums, (P.), B., 990. and Semperit Oesterr.-Amerikanische

Gummiwerke Akt.-Ges., rubber articles from rubber dispersions, (P.), B., 374.

See also Warlimont, F.

Metallhütte A. Göhringer & Hartdegen, soft solder, (P.), B., 1071.

Metallisation, Ltd., and Ballard, W. E., prevention of corrosion in aircraft, (P.),

Metcalf, F. T., treatment of fibrous materials to make them resistant to mildew, (P.), B., 338.

Metcalfe, L. R., and Hill, (Sir) A. W., effect of atmospheric pollution on vegetation, B., 597.

Metcalte, T. P. See Clemo, G. R. Metcalte, W. See Patterson, W. S. Mether, S. R., Kellogg, F., and Purviance, K., hypochromic anæmia in gastrectomised dogs; effect of beef, iron, and liver extract on blood-hæmoglobin, A., III, 11.

Metropolitan-Vickers Electrical Co., Ltd., Moritz, M. R., and Fitch, L. C., fluxes and flux-coated electrodes for

electric welding, (P.), B., 1226. and Shepherd, T. C. R., fluxes and flux-coated electrodes for electric welding, (P.), B., 1226.

See also Bancroft, F. E., Moritz, M. R., Shepherd, T. C. R., and Sykes, C.

Metzger, F. W., and Lipp, J. W., value of lime and aluminium sulphate as a repellent spray for Japaneso beetle, B., 711.

See also Fleming, W. E.

Metzger, (Mlle.) H., chemical philosophy of Jean Baptiste van Helmont, A., I, 269.

Metzger, N. See Baumann, E. J. Metzger, R., and Röhling, H., use of naphthol AS in dyeing acetate rayon, B., 1039.

Metzger, W., and Fischer, Hans, Curtius degradation in the pyrrole series. III. Autoxidation in the pyrrole series and a new synthesis of di-imidoporhyrins, A., II, 73.

Metzger, W. H., nitrogen and organic carbon of soils as affected by crops and cropping systems, B., 167.

See also Myers, H.

Metzner, A. See Eisenlohr, F.

Metzner, P., metabolic changes in unevenly illuminated seedlings, A., III, 48.

Meulen, H. ter, and Ravenswaay, H. J., determination of nitrogen by hydrogenation in betaine, pyramidone, and sulphanilic acid, A., II, 478.

Meuly, W. C. See Du Pont de Nemours & Co., E. I.

Meunier, A. Sec Lecoq, R.

Meunier, F., and Rosenthal, D., arc welding of steels other than mild steels, B., 929.

Meunier, F. J., apparatus for dry purification of a stream of gas, (P.), B., 635. Meunier, P., electrophotometer of barrierlayer [photo-]cclls for colorimetry and opacimetry, A., I, 428. Presence and distribution of aluminium in animal tissues, A., III, 7. Applications of the

allometry formula to the study of animal growth, A., III, 307. Determination of ascorbic acid in tissues, A., III, 364.

Meurice, R., and Cartiaux, J., source of error in analysis of mixed fertilisers, B., 1101.

Meuser, L. See U.S. Rubber Co.

Meuwsen, A., and Gebhardt, H., ethyl ethylsulphenate, A., II, 226.

Mewborne, R. G., and Niagara Sprayer & Chem. Co., process of drying tobacco for insecticidal purposes, (P.), B., 1274.

Meye, A., induced radioactivity in light atomic nuclei by bombardment with

a-rays, A., I, 277.

Meyenburg, H. von. Sec Erlenmeyer, H. Meyer, André, and Drutel, H., salts and complex derivatives of 4-hydroxy-2:6- and -2:8-dimethylquinoline, A., II, 389. 2:6- and -2:8-Dimethyl-4chloroquinolines; general properties; reaction with amines, A., II, 431. Condensation of 4-hydroxy-2:6- and -2:8-dimethylquinolines and of their derivatives with aromatic aldehydes, A., II, 467.

and Heimann, P., synthesis of 2:4dihydroxyquinoline derivatives from malonic esters and aromatic amines,

A., II, 304.

Meyer, August, benzene poisoning and vitamin-C, A., III, 134.

Meyer, A. E., purification of gonad-

stimulating principle from serum of pregnant mares, A., III, 73.

and Chappel Bros., gonad-stimulating hormone, (P.), B., 88. Composition for treatment of anæmia, (P.), B.,

Meyer, B. K. See Gustus, E. L.

Meyer, C. R., oats and lettuce carry needed factor for lactation, A., III, 497.

Meyer, E. See Vicher, E. E. Meyer, F. O. W. See Hartmann, F. K.

Meyer, F. W., cold main defecation [of sugar juice] with dry lime, B., 173. Meyer, (Mme.) G. See Auger, P.

Meyer, H., sensitometric studies of processing conditions for motion-picture films, B., 731.

Meyer, H. J., lining of basic and acid open-hearth furnaces. I. Basic, B., 42. Meyer, H. O., electrical temperature control, B., 54.

Meyer, H. S., Wade, L. J., and Cori, C. F., influence of extracts of anterior lobe of pituitary on glucose oxidation and glycogen storage, A., III, 320.

Meyer, J., printing of plastics, B., 1369. Meyer, J. (Zurich). See Karrer, P. Meyer, Jacob. See Necheles, H.

Meyer, Jacques. See Sartory, A. Meyer, Jules. See Ruzicka, L.

Meyer, Julius, and Chao, P., alkali salts of hydrocobalticyanic acid, A., I, 373.

Domann, H., and Müller, Willi, esters of hydroferrocyanic and hydroferricyanic acids, A., II, 180.

and Hoehne, K., halogeno-salts of rhodium, A., I, 322.

Kawczyk, M., and Hoehne, K., con-

stitution of some halogen compounds

of rhodium, A., I, 397. and Rampoldt, O., esterification of hydrocobalticyanic acid with diazomethane, A., II, 235.

and Spormann, W., behaviour of per-chloric acid in analytical work, A., I,

Meyer, K., and Stransky, H., determination of resistance of glass to chilling, B., 1204. Meyer, K. (Marburg-Lahn). See Schenck,

Meyer, Karl, Dubos, R., and Smyth, E. M., hydrolysis of polysaccharide acids of vitreous humour, umbilical cord, and of streptococcus by autolytic enzyme of pneumococcus, A., III, 169.

old Smyth, E. M., glucoproteins. VI. Preparation of chondroitinsuland -

phuric acid, A., III, 340. Smyth, E. M., and Palmer, J. W., glucoproteins. III. Polysaccharides from pig's gastric mucosa. V. Protein complexes of chondroitin-sulphuric acid, A., III, 295, 340.

Thompson, R., Khorazo, D., and Palmer, J. W., purification of bacteriophage and a respiratory pigment in Escherichia coli communis, A., III, 72.

See also Palmer, J.W.Meyer, Kirstine, Ole Romer's and Fahrenheit's thermometers, A., I, 381.

Meyer, Kurt, protein-fat antibodies, A., III, 117. Polysaccharide and lipinpolysaccharide tubercular antibodies, A., III, 251.

and Pic, A., resistance to heat of antibodies isolated from serous media, A., III, 55. Differences in thermostability of various groups of antibodies, A., III, 414. Meyer, K. E. See Ruzicka, L.

Meyer, K. H., osmotic pressure and gas pressure, A., I, 236. Permeability of membranes. V. Origin of bio-electric currents, A., I, 408. Artificial membranes: their structure and permeability, A., I, 512. Structure of crystallised components of cellulose. V., A., II, 136. Origin of bio-electric phenomena, A., III, 388. Theory of narcosis, A., III, 390.

and Badenhuizen, N. P., jun., transformation of hydrate cellulose into

native cellulose, B., 1186.

and Ferri, C., elastic properties of elastic and collagen fibres and their mole-cular significance, A., III, 168.

and Misch, L., constitution of crystallised part of cellulose. VI. Positions of atoms in the new spatial model of cellulose, A., I, 226.

and Picken, L., thermo-elastic properties of muscle and their molecular

interpretation, A., III, 375. and Sievers, J. F., elastic properties of

selenium, A., I, 228. and Streuli, P., synthesis of branched hydrocarbons with long chains, A., IÌ, 437.

Meyer, K. H., and Wehrli, H., chemical comparison between chitin and cellulose, A., II, 233.

See also Boisonnas, C. G., and Mark, H. Meyer, L. W. See Lockridge, E. R.

Meyer, Madeleine, negatively doubly-refracting constituent of cuticular layers of the plant epidermis, A., III, 446.

See also Wuhrmann, K.

Meyer, Maxence, a-ethoxy-ethylenic acids, A., II, 47. Synthesis of aa'-diethoxy straight-chain acids, A., II, 85. Ethylenic aldehydes, A., II, 246. Formation of hydrocarbons by thermal decomposition of a-ethoxy-acids, A., II, 290. Thermal decomposition of aa'-diethoxydicarboxylic acids, A., II, 367.

Meyer, P., and Thibaudet, M. A., modification of internal medium of Helix, during hibernation and estivation, A.,

III, 85.

See also Lumière, A.

Meyer, R. O. See Behrens, H. C. A. Meyer, S., determination of velocities of aparticles from their range, and relation to number of ion-pairs produced, A., I, 160.

Meyer, S. L. See Shoup, C. S.
Meyer, W., old and new sealing waxes, B., 1085. Causes of failures with coloured stoving enamels, B., 1089. Occurrence and prevention of skin diseases in the varnish and colour industries, B., 1138. [Metallic] gold paints for glass and porcelain, B., 1238. Sealing waxes, especially the new cold-sealing waxes, B., 1370. Tar-free, and especially coloured, roof paints, B., 1371.

Stückenberg, O., and Dathe, J., history, preparation, and standardisation of precipitated calcium carbonate, B., 33.

Meyer, W. R., bright deposits and thickness control [in electro-]plating progress, B., 1068.

See also Phillips, A.

Meyer, W. W., nature of china clays, B., 1205.

and Klinefelter, T. A., substitution of domestic for imported clays in whiteware bodies, B., 1050.

Meyer-Hoissen, O. See Geilmann, W.

Meyerhof, O., synthesis of creatinephosphoric acid in muscle and the "reaction-form " of sugar, A., III, 344. Kiessling, W., and Schulz, W., mechanism

of alcoholic fermentation, A., III, 394. and Ohlmeyer, P., non-replaceability of cozymase in enzymic formation of lactic acid, A., III, 69. Rôle of cozymase in lactic acid formation in muscle extract, A., III, 313.

Ohlmeyer, P., and Möhle, W., cozymase as ampholyte, A., III, 221.

and Schulz, W., heat of reaction of the aldol condensation with [formation of] hexose-I-phosphoric acid, A., I, 138.

Meyerhofer, A. F. See under Meyerhofer & Co.

Meyerhofer, E. A. See under Meyerhofer & Co.

Meyerhofer & Co., electro[-static] filters, (P.), B., 1075.

Meyers, R. G., Jones reductor, A., I, 380. Meyers, R. J. See Harkins, W. D.

Meyersberg, G., cast iron as a constructional material and its reactions to heat, B., 558. Is cast iron a brittle material? B., 559.

Meyersberg, H. See English Metal Powder

Meyerweissflog, W. E., solvent extraction of soya beans, B., 940.

Meyring, K. See Fricke, R.

Meythaler, F., and Brüning, A., course of carbohydrate metabolism in various vascular regions after injection of glucose, insulin, and adrenaline, A., III, 363. Mezen, J. F. See Koepf, G. F.

Mezey, E., swelling of skins, B., 1093.

Mezey, K., action of poisons on isolated heart-muscle strip of the frog. III. Action of metallic salts, A., III, 351. See also Benedict, J.

Mezger, R., sources and production of [town] gas in the United States, B., 746.

Mezhebovskaja, E. See Pipik, O.

Mezincesco, M. D., systematic errors in blood analysis. I. Data obtained after deproteinisation by Moog's method, A., III, 291. Muscular work and nitrogenous metabolism, A., III, 467.

Mezzadroli, G., and Minetti, E., action of activated carbons on amino-acids in connexion with sugar-juice analysis,

B., 173.

and Scarzi, L., microbial population of the [sugar-juice] diffusion battery, B., 483. Alteration of raw beet juice by micro-organisms, B., 483.

Miall, S., regulation of refrigeration com-

pressor output, B., 628.

Miceli, A. S., improved sodium fusion technique for volatile or difficultly decomposable liquids, A., II, 128.

Michael, A., and Carlson, G. H., 1:2- and 1:4-addition. II. Nitrogen tetroxide and trimethylethylene [isoamylene],

A., II, 270. and Weiner, N., 1:2- and 1:4-addition. I. 1:4-Addition of potassium isocyan-

ide, A., II, 244.
Michael, V. M. See Graham, Robert.
Michaelian, M. B., and Hammer, B. W., oxidation of acetylmethylcarbinol to diacetyl in butter cultures, B., 180.

Michaelis, E., ferromagnetic powdered-iron

cores, (P.), B., 1226.

Michaelis, L., review of the semiquinone problem, A., II, 200.

and Fetcher, E. S., two-step oxidation of benzoin to benzil, A., II, 422.

Moragues-Gonzalez, V., and Smythe, C. V., effect of various dyes on fermentation and phosphate synthesis by yeast extract, A., III, 431. and Schubert, M. F., two-step oxidation

treated for the case of phenanthra-

quinonesulphonate, A., I, 415. Schubert, M. P., and Smythe, C. V., potentiometric study of flavins, A., I, 85.

Michaelis, M., influence of halogenated acetic acids on decomposition of hexose by Bacterium coli, A., III, 275.

Michaelis, P., removal of naphthalene from coal gas, B., 864. Michaelis, R. See Braun, J. von, and

Schönberg, A. Michaelson, J. L., colour measurements, B., 509.

Michaelson, S. D. See Sinkinson, E.

Michail, D., lachrymal elimination of sodium chloride, A., III, 201.

and Vancea, P., respiration of ocular tissues, A., III, 311.

Vancea, P., and Zolog, N., lachrymal elimination of glucose in diabetics, A., III, 300. Lachrymal elimination of glucose during adrenaline hyper-glycamia, A., III, 399. Michailenko, J. I., and Kreschkov, A. P., [utilisation of] ferrophosphorus, obtained as a by-product of preparation of phosphoric acid, B., 902. Michailov, B. M. See Uschakov, M. I.

Michailov, G. See Freedericksz, V.

Michailov, N. See Molodenski, V.

Michailov, N. D., Teplopribor Works
calorimeter, B., 313.

Michailov, N. V., and Kargin, V. A.,

influence of electrolyte on non-aqueous cellulose nitrate solutions. II. Influence of heavy-metal salts and amines, A., I, 613.

Seo also Kargin, V. A.

Michailov-Micheev, P. B., and Denisov, G. M., isothermic method of carrying out creep tests over long periods of time, B., 354.

Michailova, M. N., and Neuman, M. B., autoxidation and formation of gum retarded by inhibitors, B., 1005.

See also Golovkov, M. P., and Obukov, A. P.

Michailova, N. F., analysis of non-metallic inclusions in steel, B., 447.

Michailova, V. V. See Borshkovski, S. E. Michailovskaja, O. See Sandomirski, M.,

and Schmidt, A.

Michailovskaja, V. I. See Fortunatov, N. S. Michalev, P. F., mathematical expression of periodic phenomena, A., I, 132.

See also Sarkisov, E. S.Michalowski, R., formation of crythrocytes

in the embryonic pancreas, A., III, 289. Michalski, E., electro-titration of mer-

curous salts, A., I, 263. Michalski, M. See Kemula, W.

Michaltschisehin, G. T., rapid analysis of

metals and alloys, B., 575.

Michaltschuk, B. V., and Brntzkus, E. B., use of a photo-electric colorimeter in analysis of fertilisers, B., 1100.

Michaud, F., crystalline arborescences, A., I, 131. Energy theory of gases, A., 1, 506. Reduction of the fundamental laws of chemistry to a single proposition, A., 1, 602.

Michaud, R., application of X-rays to metallurgy, B., 788.
 and Segol, E., recrystallisation of alu-

minium-magnesium alloys, B., 796. Michaut, P. See Segond, L.

Miehaux, A. See Alquier, J.

Micheel, F., Bode, G., and Siebert, R., reductones, A., II, 441.

Dietrich, H., and Bischoff, G., neurotoxins from venom of species of cobra, A., III. 457.

and Mittag, R., scorbamic acid, A., II, 180. Vitamin-C [and scorbamic acid], A., II, 274.

and Ruhkopf, H., transformation of hexoses into inositol, A., II, 230.

Micheeva, V. I. See Kurnakov, N. S. Michel, A., solid solutions of ferrous sulphide with sulphur, selenium, and arsenic, A., I, 23. Relations between solid solutions formed by ferrous sulphide, A., I, 297.

Michel, F. Y., arbutin diabetes, A., III, 89. Michel, H. O. See Bernheim, F.

Michel & Marchal, [metal] sheet material having the properties of low heat conductivity and small resonance, (P.), B., 1145.

Michel-Dnrand, E., changes in plant nucleic compounds during extraction in presence of trichloroacetic acid, A., III, 245. Determination of phosphate in plant extracts, A., III, 367. Michel-Jaffard, R., structure of straw, esparto, flax, and cotton fibres, B., 123.

Michel-Lévy, A., and Muraour, H., photographs at intervals of 0 0001 second of phenomena accompanying the detonation of a shattering explosive, A., I, 250.

See also Muraour, H.

Michelbacher, A. E. See Essig, E. O. Micheli, L. I. A., and De Gyulay, O. S., exhaustion of final molasses, B., 173.

Michels, A., Bijl, A., and Michels, C., thermodynamic properties of carbon dioxide up to 3000 atmospheres between 25° and 150°, A., I, 453.

Blaisse, B., and Michels, C., isotherms of carbon dioxide in the neighbourhood of the critical point and round the coexistence line, A., I, 453.

and Michels, C., scries evaluation of isotherm data of carbon dioxide between 0° and 150° and up to 3000 atm., A., I, 453.

See also Versluys, J.

Michels, C. See Michels, A. Michels, W. C., and Cox, (Miss) Martha, thermal conductivity of tungsten, A., I, 176.

Michelson, A. S., thermoregulator for high temperatures, A., I, 265.

Michelson, E. M. See Schebalin, K. N.

Michelson, I. D. See Deere, C. J.

Michelson, L. A., composition of seed oil of Ailanthus glandulosa, Desf., B., 366.

Michez, J., diathermy and secretion of adrenaline, A., III, 228. Transpancreatic diathermy and regulation of the blood sugar, A., III, 291.

Michiana Products Corporation. See Burckhalter, R. N.

Michigan State Board of Agriculture. See Huston, R. C.

Michlin, D., rôle of ascorbic acid in reduction of nitrates in plant tissues, A., III, 239. Aldehyde mutase, A., III, · 268.

and Borodina, O. J., reversibility of action of lactase, A., III, 142. and Ivanov, (Mlle.) N., origin of uric acid in plants, A., III, 50. and Kolesnikov, P. A., enzymic re-

duction of nitrate in green vegetable cells, A., III, 239. Influence of colloids and electrolytes on equilibrium

under action of maltase, A., III, 313. Michlin, S. G., polarographic determination of iron, A., I, 199.

See also Burkser, E. S. Michlina, S. E., action of aluminium chloride on octahydroanthracene, A., II, 285. Cracking of wash oil from the Neftegaz factory with anhydrous aluminium chloride, B., 750.

Michnevitsch, G. L., Brovko, J. F., and Badadshan, A. B., surface phenomena in the crystallisation of supercooled liquids in thin layers. I., A., I, 562.

Michot-Dupont, F., utilisation of lignite and peat in view of the production of motor fuels, B., 861. Liquid fuels obtained by carbonisation of raw oleaginous seeds, B., 1152.

Mick, K. L., effect of modern sewage treatment on sources of public water supplies,

Micksch, K., water-soluble adhesives without flour, B., 818. Flame-proofing for rayon, B., 1196.

Micović, U. M., and Robinson, R., constitution of brazilein, A., II, 111.

Miczyńska, B., and Miczyńska, K., phenolstaining of grains and ears in differentiating Polish wheat varieties, B., 78. Miczyńska, K. Seo Miczyńska, B.

Mid-Continent Petroleum Corporation. Sec Bennett, H. T., and Jacobs, D. L. Mid-West Abrasive Co. See Rizor, R. H.

Midana, A., and Grande, L. D., influence of pathological skin conditions on experimental hyperketonæmia, A., III, 171.

Middel, V., photo-electric measurements with antimony, A., I, 395.

Middel, W. See Oelsen, W. Middelberg, A. W. F. See Gravestein, H. Middelboe, K., formation of dry or wet materials into nodules or porous masses, (P.), B., 4.

Middleham, T. H. See Sarjant, R. J. Middleton, A. R., and Wernimont, G. T. improved methods for subdividing cation group II and for separating antimonous and stannic sulphides, A., I, 376.

Middleton, G., anomalous viscosity of mueilage of tragacanth, B., 86. Standardisation of tragacanth, B., 86.

Middleton, G. J. See Wilson, Hewitt. Midgley, T., jun., and Henne, A. L., natural and synthetic rubber. XVII. Separation of sol and gel rubber, B., 814.

Midland Steel Products Co. See Sherbino, M. R.

Midorikawa, Y. Sce Nakasone, T. Miduno, S. Sce Takayama, Y.

Miège, E., Brodskis, and Courtine, cooking of leguminous seeds, B., 1125.

Miebler, H. See Dyckerhoff, H. Miekeley, A. See Grassmann, W. Mields, H. Sco Rieke, R.

Mields, M., construction of electrically heated laboratory [muffle] furnaces, A., I, 478.

Mielecki, T. See Mazoński, T. Mielnikowa, B., and Tuszyński, J., Polish

aeroplane benzine, B., 517. Mienes, K., surgical bandage, (P.), B., 1274. Mierdel, G., and Schmalenberg, W., field strength along the positive column in mercury vapour with very small current densities, A., I, 104.

Mies, O., acetone content of bottled acetylene, B., 1016.

Miescher, E., SiBr bands, A., I, 392. Miescher, G., eczema. I. Specificity of the

cczematous skin reaction, A., III, 461.

Miescher, K., Fischer, W. H., and
Tschopp, E., effect of enol-esters of testosterone, A., III, 492.

and Scholz, C., esters of the follicle hormono series, A., II, 199. New compounds of the follicle hormone series, A., II, 505.

Wettstein, A., and Tschopp, E., activation of male sex hormones. I. and II., A., III, 75.

Miesowicz, M., influence of magnetic field on viscosity of liquids in the nematic phase, A., I, 176.

See also Held, E. F. M. van der. Migal, P. K., and Golovtschenko, V. A., adsorption of benzene vapour from a current of air, A., I, 510.

Migeon, G., sepiolites, A., I, I56. Migge, A. Sco Meerwein, H.

Mighell, R. H., light-sensitive [selenium] cell, B., 1362

Migliaccio, O. M., urobilin; modification of the Schlesinger reaction in urine analysis, A., III, 121.

Migliardi, C. See Angeletti, A.

Migliaro, J. C. Seo Sassi, A. V.

Mignon, S. See Levy, Max.

Mihaéloff, S., conductometric determination of chlorides in biological liquids, A., III, 82. Rapid detection of acute poisoning with mercury, arsenic, or lead, A., III, 310. Mihara, T. See Kondo, K.

Miholić, S., determination of iodine and bromine in mineral and drinking waters, A., I, 44. Determination of sodium and potassium in mineral and drinking waters, A., I, 44. Analysis of the Vrdnik thermal spring, A., I, 51. Analysis of the Vilma spring of Slatina Radenci, A., I, 51. Analysis of radioactive water of the Celja spring, A., I, 269. Biochemistry of iodine, A., III, 256. Mika, J., micro-titration of very weak bases, A., I, 260.

Mikei, I. J., Brodska, I. A., and Tschorni, A. T., red and yellow Tschubarovka ochres, A., I, 334.

Mikeska, L. A. See Standard Oil Development Co.

Mikulas, W., Thomassen, L., and Upthe-grove, C., equilibrium relations in the nickel-tin system, A., I, 559.

Mikulinski, A. S., production of corundum in a blast furnace by way of aluminium sulphide, B., 914.

and Podtimtschenko, E. N., kinetics of dehydration of magnesium sulphate

heptahydrate, A., I, 250. and Rubinstein, R. N., calculation of the activation energy of dehydration of magnesium sulphate, A., I, 250.

and Schtscherbakov, A. A., dehydration of magnesium sulphate in Gaillard towers, B., 340.

and Umova, M. A., reaction of alumina with iron sulphide in presence of carbon, B., 43.

Mikusch, J. D. von. See Pelikan, K. A. Milaan, J. B. van. See Burger, H. C. Miladowski, W. See Urbánski, T.

Milas, N. A., Kurz, P. F., and Anslow, W. P., jun., photochemical addition of hydrogen peroxide to the double linking, A., II, 175.

Milaschevitsch, V. L. See Nikolaev, N. S. Milazzo, G., and Pauli, W., highly purified chromic hydroxide sol, A., I, 181.

Milbauer, J., [photo-electric] sedimento-meter, A., I, 99. Minimum amounts of catalysts which give a maximum effect in concentrated sulphuric acid, A., I, 143. Reactions in concentrated sulphuric acid. II. Influence of gases. IX. Kjeldahlisation in a presence of various gases. X. Molecular oxidation velocities, A., I, 417, 524, 625. Determination of the anions of the arsenic and selenium acids in presence of one another, A., I, 425. Rates of combustion in concentration sulphuric acid, A., I, 570. Purification of water of the river Vltava, B., 92.

and Vodrázka, J., determination of arsenite, arsenate, selenite, and selenate present together, A., I, 375.

Milbourne, C. G. See Ward, A. L. Miles, A. A., and Halman, E. T., black rot

in eggs, B., 613. See also Kenny, M.

Miles Laboratories, Inc., crushing and dispensing device [for tablets], (P.), B., 858. Miley, H. A., thickness of oxide films on iron, A., I, 301. and Evans, U. R., passivity of metals.

VIII. Rate of growth of oxide films on iron, A., I, 511.

Miley, H. A. See also Evans, U. R. Milhorat, A. T., and Deuel, H. J., jun., uranium nephrosis, A., III, 343.

Milianczuk, B., influence of magnetic field on Compton effect, A., I, 387.

Milinski, A. A., purification of solutions in production of titanium dioxide, B., 34. Miliotis, J., transposition of the functional group carboxyl in the form of an ester, A., II, 281.

Miljutin, G. See Trapeznikova, O. Milk Processes, Inc. See Wendt, H. D. Millar, A. P., wastes disposal as related to shellfish, B., 849.

Millar, C. E. See Turk, L. M.
Millar, H. C., Smith, F. B., and Brown,
P. E., base-exchange capacity of decomposing organic matter, B., 164. Influence of organic matter on nitrate accumulation and base-exchange capacity of Dickinson fine sandy loam, B., 1250. Rate of decomposition of various plant materials in soils, B., 1251.

See also Smith, F. B.

Millar, R. W. See Shell Development Co. Millat, L. See Perrot, E., and Raymond-Hamet.

Miller, A. H., paraldehyde and other preliminary hypnotics, B., 1406.
Miller, A. L., Darby, G. M., and Dorr Co.,

bisulphite liquor, (P.), B., 1047. Shafor, R. W., Darby, G. M., and Dorr Co., bisulphite liquor, (P.), B., 1047.

Miller, A. M. Sce Curtis, H. A. Miller, B., fluid flow in clean round straight

pipe, B., 1286. Miller, B. E. M. See Brit. Celanese.

Miller, B. F., and Dubos, R., enzyme for decomposition of creatinine and its action on "apparent creatinine" of blood, A., III, 139.

Miller, C. C., soft-soldering problems, B., 449. Cored solders, their manufacture and applications, B., 684. Fluxes for

soft soldering, B., 795.

Miller, C. D., adsorption of vitamin-B by plant tissue (Solanum melongena, L., and Raphanus sativus, var. longipannatus, Bailey) when pickled with salt and rice bran, A., III, 494.

and Robbins, R. C., nutritive value of the papaya, A., III, 107. Composition and vitamin studies of green soya beans, A., III, 230. Vitamin-C in fresh pineapple juico and in guavas, A., III, 233.

Miller, C. E., and Cain, R. A., synthesis of ureides of some monobasic acids and

ketones, A., II, 329.

Miller, C. F., diphenylsemicarbazide, A., I, 329. Determination of chromium in organic compounds, A., II, 313. Colorimetrio determination of silver in minerals, B., 686.

Miller, C. O., and Furman, N. H., use of iodine and potassium iodate as volumetric oxidising agents in solutions containing mercuric salts. II. Oxidation of phenylhydrazine and of semicarbazide by means of potassium iodate, A., I, 148.

See also Furman, N. H., and Siehrs, A. E.

Miller, D. G., improving tile-drain resistance to alkaline conditions [of soils], B., 555. Miller, D. W. See Smith, W. M. Miller, E. C., physiology of hard winter

wheat plants, A., III, 499. Miller, E. J. See Duncan, C. W. Miller, E. L. See Bright, W. M. Miller, E. P. See Lark-Horovitz, K.

Miller, E. S., and Barr, G. O., photoelectric spectrophotometry applied to studies in fat metabolism, A., III, 421.

Miller, E. W. See Pybus, F. C.

Miller, F. A., De Vries, T., and Miller, M. A., adsorption of diphtheria toxin and toxoid on colloidal gels, A., III, 167.

Miller, F. E., composition for colouring and waterproofing concrete, etc., (P.), B., 787.

Miller, F. S. Sce Gustafson, J. K. Miller, G. L., and Du Vigneaud, V., cystine

content of insulin, A., III, 186. See also Du Vigneaud, V.

Miller, G. W. See Universal Oil Products Co.

Miller, H. J. See Neave, D. P. C., and Radio Corp. of America.

Miller, H. S., separation of beryllium in presence of complex tartrates, A., I, 375. Effect of time on iodometric sugar analysis, B., 381.

See also Thomas, A. W.
Miller, I., Miller, R., Coffing, C., and
Sanborn, R. E., colloidal sulphur, (P.), B., 1203.

Miller, Joseph. See Fellers, C. R. Miller, Julius. See Markush, E. A.

Miller, J. C., carbon dioxide accumulations in geologic structures, B., 1200.

Miller, J. D., new metals in the pulp and paper industry, B., 575. Sulphite [pulp] mill construction materials, B.,

Miller, J. F., reagent for the detection of cerium, A., I, 328.

Miller, J. G., and Lucasse, W. W., apparatus and experiments for instruction in potentiometric measurements, A., I, 202.

Miller, J. I., Morrison, F. B., and Maynard, L. A., relative efficiency for growing lambs of protein in rations supplemented by soya-bean oil meal, linseed meal, or maize-gluten meal, B., 976.

See also Salisbury, G. W. Miller, J. J., crystal structure of anhydrous sodium chromate, Na₂CrO₄, A., I, 17.

Miller, J. L. See Lucas, Ltd., J. Miller, J. M. See Jones, John H.

Miller, J. T., and Byers, H. G., selenium in plants in relation to its occurrence in soils, A., III, 444.

Miller, J. W. Sce Dudley, H. C. Miller, L., and Calvery, H. O., enzymic hydrolysis of lactalbumin, A., III, 32.

Miller, L. B. See Bauer, F. C.
Miller, L. P., decomposition of ethylene chlorohydrin in potato tubers, A., III, 443.

Miller, M. See Demeter, K. J., and Niklas, H.

Miller, M. A., colloidal copper and alcoholic aluminium oxide gel, A., I, 80. Movement of crystalline iodine in silica gel, A., I, 183. Crystal transfer mechanism. II. Iodine-iodide crystal exchange reactions in silica gel, A., I, 305. Crystallisation of iodine and iodides in gels, A., I, 564.

Miller, M. C.See Cummins, A. B. Miller, N. F. See Bartell, F. E. Miller, P. A. See Bancroft, W. D. Miller, P. H. See Brit. Celanese. Miller, R. Sce Miller, I.

See also Miller, F. A.

Miller, R. D., Geiger-Müller counter measurements of reflected Mo Ka X-rays from powdered zinc, A., I, 436. Miller, Richard F., and Milligan, W. E., influence of temperature on elastic limit of single crystals of aluminium, silver,

and zinc, B., 574. Miller, Richard Froman, and Adams, R., structure of gossypol. IV. Anhydrogossypol and its derivatives, A., II,

Butterbaugh, D. J., and Adams, R., structure of gossypol. II. Acylation, A., II, 463.

See also Bailar, J. C., jun.

Miller, Robert F. See Guilbert, H. R., and Hart, G. H.

Miller, R. L. See Yothers, W. W. Miller, R. W., hydrocarbon hydrates, B.,

and Pittsburgh Plate Glass Co., material for use in oil refining, (P.), B., 1162.

Miller, S. P. See Barrett Co. Miller, T. G. See Abbott, W. O.

Miller, T. H., and Allen & Co., E., rotary [hammer-]erushing, granulating, pulverising machines, (P.), B., 100.

Miller, V. See Oldright, G. L.
Miller, W., and Continental Oil Co., removal of corrosive substances from hydrocarbons, (P.), B., 874.

Miller, W. B. See Haynes Stellite Co. Miller, W. Lash, Wildier's bios, A., III,

Miller, Walter L., electro-analysis of silvercopper alloys, B., 146.

Miller, W. S., and King, A. J., structure of polysulphides. I. Barium trisulphide,

A., I, 288.
Miller, W. Stuart. See Calico Printers' Assoc.

Miller, W. T., jun., Calfee, J. D., and Bigelow, L. A., action of elementary fluorine on organic compounds. III. Vapour-phase fluorination of hexachloroethane, A., III, 81.

Miller, W. T. W., and Sarjant, R. J.,

evolution of types of crushers for stone and ore, and characteristics of rocks as affecting abrasion in crushing machinery, B., 95.

Miller & Co., Inc., M. B., and Tuttle, M. H., refining of mineral oil stocks, (P.), B., 411.

See also Tuttle, M. H.

Milles, G., and Seed, L., effect of parenterally administered peptone, A., III, 390. Millet, M., Refetoff, R., and Finelerc, L., changes in the fermentation by B. coli in presence of Enterococcus, A., III, 317.

Millett, H. C., and Cobb, J. W., scaling of mild steel in sulphur-free and sulphurcontaining furnace atmospheres, B.,

See also Dent, F. J.

Millidge, A. F. See Linstead, R. P. Milligan, J. C. See Arnot, F. L.

Milligan, L. H. See Schumb, W. C. Milligan, W. E. See Miller, Richard F.

Milligan, W. O., and Weiser, H. B., direct examination of sols by X-ray diffraction methods, A., I, 182. X-Ray studies on the hydrous oxides. VIII. Gallium, indium, and thallic oxides, A., I, 575.

See also Weiser, H. B.

Millikan, G. A., muscle-hæmoglobin in vivo; instantaneous measurement of muscle metabolism, A., III, 303.

Millikan, R. A., Neher, H. V., and Haynes, S. K., precision cosmic-ray measurements up to within 1-2% of the top of the atmosphere, A., I, 59.

Neher, H. V., and Korff, S. A., new high-altitude measurements on cosmicray intensities, A., I, 546.

See also Anderson, C. D., and Bowen, I.S.

Milliken, F. R., flash-roasting and its applications, B., 927.

Millman, S., and Zacharias, J. R., signs of the nuclear magnetic moments of 7Li, 85Rb, 87Rb, and 133Cs, A., I, 441.

See also Manley, J. H.

Millner, T., and Kunos, F., determination of small amounts of arsenic in presence of tungstic acid, A., I, 45.

Mills, E., and Marsh, E. C. J., thickness of the electroplated coating and methods for its measurement, B.,

See also Marsh, E. C. J.

Mills, E. M. See Munch, J. C. Mills, G. A. See Herbert, W. S.

Mills, H. N. See Pettett, L. J.
Mills, L. D., Crowe, T. B., Haun, J. C., and Merrill Co., metallurgical processes for recovery of metals [gold and silver] from ores, (P.), B., 457. See also Merrill Co.

Mills, L. E. See Dow Chem. Co.
Mills, L. M., cetyl alcohol as an enteric coating material, A., III, 349. See also Holck, H. G. O.

Mills, M. W. See Leitch, P. A., and Mills & Co. (Engineers), J.

Mills, W. H., and Kelham, R. M., optical activity dependent on restricted rotation in a benzene derivative, A., II, 143.

Mills Alloys, Inc. See Marvin, O. F. Mills & Co. (Engineers), Ltd., J., and Mills, M. W., separating sand and other heavy solids from crude sewage, (P.), B., 506.

Millspaugh, W. H., moulds for casting metals, (P.), B., 455.

Milne, G., soil conditions and two East African vegetation types, B., 819.

Milne, S., beating engines for paper pulp, (P.), B., 1193.

Milner, C. J., magneto-resistance effect in single crystals of cadmium, A., I, 227. Magneto-resistance effect in cadmium at low temperatures, A., I, 449.

See also Kapitza, P. Milner, H. W. See Spoehr, H. A.

Milner, R. T., and Sherman, M. S., organic micro-analysis. II. Drying and analysis of hygroscopic substances, A., II, 40.

Miłobedzki, T., genealogy of phosphorus and its compounds, A., I, 499.

Milone, M., Raman effect of some oximinoketones, A., I, 220. Raman effect of some aliphatic monoximes, A., I, 599.

and Venturello, G., dioximes. CXVIII. [Heats of combustion], A., I, 186.

Milos, C., detection of cocaine in mixtures of cocaine and nupercaine, B., 1267.

Milosavlevitsch, D., the van der Waals and the Clausius characteristic equations, A., I, 354. Characteristic equations of imperfect gases, A., I, 354.

Miloslavski, N. M., and Dolgina, J. I., potentiometric determination of copper [in steel], B., 681.

and Gurevitsch, A. B., microcolorimetric determination of tungsten in alloy steels, B., 352.

Miloslavski, N. M., and Vavilova, E. G., colorimetric determination of manganese and molybdenum in steel, B., 352. Photo-nephelometric determination of calcium, and its application of analysis of slags, B., 795.

Miloslavski, S. J., and Glizmanenko, D. L., gases used in welding of metals, B., 45. Methane as fuel in fusion-welding and

-cutting, B., 45.

Milovanova, S. K., and Voskresenski, S. K., extraction of phosphoric acid from Viatka flotational phosphorite, with decantation of pulp and washing of gypsum in concentrators, B., 32.

Milovidov, P. F., theory and technique of nuclear staining, A., III, 286.

Milovodski, V. See Laptev, A. Milton, G. J. G., and Reade, T. H., action of sodium nitrite on p-nitrodimethylaniline in hydrobromic acid, A., II, 57. Milton, W. E. J. See Davies, R. O.

Milus, P. R., thermochemical examination of nitrocellulose, B., 655.

Mimno, H. R., physics of the ionosphere, A., I, 493.

Mimrikova, V. N. See Gaponenkov, T. K. Mimura, Y., and Iwatsuki, T., atomic structure, A., I, 546.

Minaev, V., chlorine bleaching [of textiles], B., 659.

Minaguchi, T., and Rin, Z., effect of arsenobenzene preparations on mice infected with Trypanosoma cruzi, A., III, 419.

Minard, G. See Neuberg, C.

Minatoya, S., Ebe, T., and Aoe, I., determination of diphenylguanidine, A., II, 80. Minder, IV., [crystal structures of] alkali ferrihexafluorides, A., I, 448.

Mindlin, R. D., analysis of doubly refracting materials with circularly and elliptically polarised light, A., I, 634.

Mindlin, S. S., Kuzmina, L. I., and Kaplan, M. A., colloxylin for transparent cellu-

loid manufacture, B., 588. and Zeldovitsch, P. J., elimination of iron from water, B., 398.

ne, K., organic magnesium compounds. III. Lead tris-m-tolyl. IV. Mine, Reaction between alkyl p-toluenesul-phonates and RO Mg·X. V. Reaction between alkyl esters of p-toluenesul-phonic acid and OR-MgX, A., II, 80, 181.

Miner, D. F., and Seastone, J. B., melting and annealing of electrical and magnetic

alloys, B., 1215.

Minerals Separation, Ltd., flotation-separation apparatus, (P.), B., 303.

Minerals Separation North American Corporation. See Keller, C. H., and Mayer,

Minerva Soc. Anon., continuous manufacture of bands of artificial silk fibres, (P.), B., 1192.

Mines Réunies, Soc. Anon., and Buttgenbach, H., extraction of precious metals, more particularly applicable to the treatment of poor ores, (P.), B., 251.

Mineshita, T., lu-jung, the Chinese drug. II. History in Japan, B., 840.

Minett, F. C., diseases of animals; prevention and treatment, B., 826. See also Wilson, G. S.

Minetti, E. See Mezzadroli, G. Minger, F. R. See Dow Chem. Co.

Minibeck, H., quantitative fluorescence-photometric microanalysis. I. Fluorescence-photometer for use with visible and ultra-violet light, A., I, 581.

Miniovitsch, M. A., preparation of sodium nitrite from soda and dilute and concentrated oxides of nitrogen, B., 902.

and Komarovski, M. S., corrosion of metals in reaction between sodium nitrate and potassium chloride, B., 143.

Ministry of Health, bacteriological tests for graded milk, B., 488.

Minkoff, G. See Distillers Co.

Minkow, I. See Lachs, H. Minne, R. See Dulière, W. L.

Minnesota Mining & Manufacturing Co. See Carlton, R. P.

Minnesota University, Board of Regents. See Diehl, H. S.

Mino, M., relation of vitamins to diphtheria toxin and antitoxin, A., III, 439.

Minor, J. E. See Barber, F., and Winterbottom, M.

Minot, A.S. See Mason, M.F.

Minsaas, J., two new methyl-I-fucoside

triacetates, A., II, 325. Mintschenkov, M. P. See Rapoport, I. B. Mintz, E. U., test of the interval rule in the $^{2}D_{3/2}$ state of Bi 1, A., I, 2.

and Granath, L. P., test of the interval rule in the ${}^2D_{3/3}$ state of Bi I, A., I, 486. Minz, B., and Agid, R., effect of vitamin-B₁

on the activity of acetylcholine, A., III, 495.

See also Gayet, R., and Marnay, A. Minz, S., and Sorianni, E., action of adrenaline and atropine on blood-alcohol, A., III, 137.

Miraglia, P. R. See Hepburn, J. S.

Mircev, A. See Sandera, K.

Mirev, D., desulphurisation of coke, B.,

See also Trifonov, I.

Mirlis, D. I., kinetics of wetting and linear corrosion of metals in polyphase systems: metal-liquid-liquid and metal-liquid-gas. II. and III., A., I, 367, 512.

See also Gindin, L. G.

Miroir, C., can the Anstett test be used for cements for use in sea-water? B., 442. Mironenko, G. I. See Juriev, J. K.

Mironov, S. A., best thermal treatment for concrete, B., 442.

Mirontschik, A. See Jermolenko, N. F. Miropolski, V. I. See Loginov, N. E.

Miroschnitschenko, F. D., rate of spread of magnetisation, A., I, 227.

Miroschnitschenko, K. S., volumetric determination of vanadates by a precipitation method, A., I, 265.

See also Fortunatov, N.S.

Mirsky, A. E., protein coagulation as result of fertilisation, A., III, 21. Coagulation of myosin by dehydration, A., III, 119. Coagulation in muscle, A., III, 119.

Mirsky, I. A., site and mechanism of antiketogenic action of insulin, A., III,

186.

and Broh-Kahn, R. H., effect of experimental hyperthyroidism on carbohydrate metabolism, A., III, 279.

Heiman, J. D., and Broh-Kahn, R. H., antiketogenic action of glucose in absence of insulin, A., III, 385.

Heiman, J. D., and Swadesh, S., rôle of thyroid in increased protein metabolism of phloridzin diabetes, A., III, 438.

Mirus, W. See Rohmann, C.

Misch, L., and Picken, L., structure of polyvinyl acetate, A., I, 554. See also Meyer, K. H.

Mischin, V. P., and Karpov, A. N., temperature coefficient of adsorption from solutions. I., A., I, 234.

and Polotschanskaja, E. E., temperature coefficient of adsorption from solutions.

II., A., I, 234.

Mischke, W. See Schuster, Karl.

Mischkis, Maria S. See Epelbaum, S. E., and Mischkis, Meer S.

Mischkis, Meer S., and Mischkis, Maria S., effect of diet on phosphorus and nitrogen compounds of muscle in fatigue. II., A., III, 127. Effect of the boiler-makers' work on composition and properties of

their blood. III. Acid-base balance of the blood. III. Lactic acid content of the blood, A., III, 292.

Mischtschenko, K. P. See Varasova, E. N.

Mischulovitsch, L. J., waste rock from coal pits as a ceramic raw material, B., 1339. Mischustin, I. See Pisarenko, A.

Miseta, O., distribution of chlorine and urea in blood and bile, A., III, 249.

Mishima, T. See Nagaoka, N.
Mishkind, D. I. See Kleiner, I. S., and
Weisman, A. I.

Mishra, B. See Banerjea, G. B., and Singh, B. K.

Miskella, W.J., procelain enameling, B., 345.

Miskinova, T. See Rubinstein, D. L. Mislowitzer, E., device for dispatching swabs, blood samples, etc., for bacteriological and diagnostic purposes, (P.), B., 291.

Misra, R. N., and Dutt, S., seeds of Cichorium intybus, L.; constituents of the oil from the seeds, A., III, 368.

Missbach, E. C., and Stauffer Chem. Co., preservation of chlorinated hydrocarbons, (P.), B., 524. Stabilised carbon tetrachloride, (P.), B., 524. Mississippi Glass Co. See Sharp, D. E.

Mitani, H., micro-determination of water in biological fluids, A., III, 192.

Mitchell, A. C. G., long-period activity in cadmium irradiated with neutrons, A., I, 439. Sargent curves for artificially radioactive substances, A., I, 490. and Langer, L. M., energy of the γ -rays

of radioindium and radiomanganese, A., I, 489.

and Varney, R. N., neutron scattering cross-section as a function of energy, A., I, 544.

Mitchell, C., progress in clinical urinology, A., III, 458.

Mitchell, C. A., tannin considered from a non-tanning point of view, B., 68. and Ward, T. J., photographic light-filter cell, A., I, 49.

Mitchell, C. D. See Robinson Bros. Mitchell, C. R. See Green, H.Mitchell, D. F. See Brennan, J. J.

Mitchell, D. P.See Rasetti, F.

Mitchell, F. S. See Spencer, E.

Mitchell, G. A. See Dunning, J. R. Mitchell, H. H., and Beadles, J. R., nuts fail as adequate substitutes for meat, A., III, 466. Maize sugar similar in [nutrient] value to cane sugar, A., III,

Burroughs, W., and Beadles, J. R., significance and accuracy of biological values of proteins computed from nitrogen metabolism data, A., III, 17. and Fairbanks, B. W., nutritive values of dried milk, B., 1399.

and Hamilton, T. S., sex differences in anæmic rats, A., III, 255. See also Fairbanks, B. W.

Mitchell, H. L., determination of nutrient needs of shade trees with special reference to phosphorus, B., 825. and Finn, R. F., relative feeding power

of oaks and maples for soil-phosphorus, B., 826.

Mitchell, H. S., and Cook, G. M., influence of protein or cystine intake on the cataract-producing action of galactose, A., III, 419.

Merriam, O. A., and Cook, G. M., relation of ingested carbohydrate to type and amount of blood- and urine-sugar and to the incidence of cataract in rats, A., III, 470.

Mitchell, J. G., film formation of tars, B., 1002.

Mitchell, J. H. See Elting, E. C.

Mitchell, J. S., rôle of molecular orientation in photochemical reactions in mono-layers, A., I, 40. Structure of protein monolayers, A., I, 511.

Rideal, E. K., and Schulman, J. H., effects of traces of metallic ions on monolayers, A., I, 301.

See also Rideal, E. K.

Mitchell, J. W., measurement of respiration and carbon fixation of plants under controlled environmental conditions, A., III, 49. Effects of carbon arc light on chemical composition and vegetative propagation of tomato plants grown with a limited supply of nitrogen, A., III, 235. Effect of atmospheric humidity on rate of carbon fixation by plants, A., III, 240.

and Hinshelwood, C. N., inhibition of photochemical reactions by nitric oxide, A., I, 370.

and Martin, W. E., stirring gases within a closed chamber, A., I, 636.

Mitchell, M. S. See Gen. Asphalte Co. Mitchell, N. W. See Crampton, D. K.

Mitchell, R. L., and Muir, A., base-exchange capacity and clay content of soils, B., 594. Mitchell, R. W., metal cleaning, B., 688.

Mitchell, T. A., and Hughes-Mitchell Processes, treatment of zinc-bearing ore material, (P.), B., 933. Apparatus for treating granular material [ores] with a reagent gas, (P.), B., 1071. Chloridising [zinc] ore materials, (P.), B., 1071. Sessions, R. L., and Hughes-Mitchell

Processes, sodium and zinc sulphides, (P.), B., 237. Zinc sulphide, (P.), B., 437, 813. Zinc sulphide pigments, (P.), B., \$13. Treatment of zinc-bearing ores and recovery of zinc oxide, (P.), B., 909.

Mitchell, W. See Boyle, J. S. W. Mitchell, W. M., steel alloys [in food

manufacture], B., 447.
Mitchovitch, V. M., and Stefanovitch, G., reduction of glycerides by Bouveault and Blanc's method, A., II, 439.

Mitford, W. B. See Strevens, J. L. Mitić, R. V. See Pushin, N. A.

Mitlo, S., dielectric constant, density, and refraction of ternary systems, A., I, 232. Mitolo, M., reducing substance in brain, A., III, 168.

Mitra, B. N., racemisation of the proteins of Vibrio choleræ and related organisms. I. Diamino-acids. II. Monoamino-acids, A., III, 318. Nucleic acid of proteins of Vibrio choleræ and related organisms, A., III, 488. Absorption spectra of the proteins of Vibrio choleræ and related organisms, A., III, 488. See also Linton, R. W.

Mitra, N. C., and Venkataraman, K., volumetric determination of moisture. A., I, 43.

Mitra, R., reactions responsible for soil acidity. V. Titration curves of clay acids, B., 267.

See also Mukherjee, J. Mitra, S. M., Raman spectrum of decahydro-

naphthalene, A., I, 63. Fluorescence of cyclohexane, A., I, 217.

Mitrofanov, S. I., flotation of Melentevsk [gold] ores, B., 685.

Mitsche, R., primary structure of cast iron, B., 445. Processes for surface protection of metals, B., 567. Very finely-divided, non-metallic inclusions [in metallic melts], and action of kindred and foreign nuclei, B., 573.

See also Walzel, R.

Mitscherlich, E. A., evaluation of the potassium and phosphoric acid in stall manure, B., 478. Nutrient content of soils, B., 595. "Chemical analysis" of soil, B., 706.

and Beutelspacher, H., determination of organic nitrogen by Kjeldahl's method

in presence of nitrates, B., 706.

Mitscherling, W. O., treatment of [aliphatic] hydrocarbons, (P.), B., 23*.

Mitschovitsch, V. M., preparation [ethyl] esters [using toluene], A., II, 481.

Mitsuda, H. See Kondo, K. Mitsui, S. See Shioiri, M.

Mitsuwa, T. See Kotake, M. Mittag, R. See Micheel, F.

Mittasch, A., catalysis and catalysts in chemistry and biology, A., I, 35. Fictions in chemistry, A., I, 429. Mittelstaedt, R. E., stabilisation of settling-

basin [sewage] sludge by activated carbon at Sacremento, B., 847.
Mitter, P. C., and Ray, S. C., synthesis of

substances related to capsaicin, A., II,

Mittmann, G. See Schlenker, G.
Mittra, R. N., periodic precipitation in
absence of foreign gel. I. Ferric hydroxide sol, A., I, 410.

Mitui, T., sugar cane wax. I. Phytosterols, A., III, 368.
Mitzkevitsch, D. See Kozlov, N.

Miwa, S. See Kato, K. Miwa, T., Cheng, C. T., Fujisaki, M., and Toishi, A_{**} , specificity of glucosidases. I. Behaviour of β -d-glucosidases of different sources with β -d-glucosides with

varying aglucones, A., III, 482. Mixon, L. W. See Marker, R. E. Miyachi, S., poisonous substance of larvæ of Dendrolinus undans, Walk., var. excellens, Butler, A., III, 8.

Miyaji, T. See Ishida, K.

Miyakawa, T. See Fuseya, G.

Miyake, M. See Sameshima, J.

Mirake, S. study of oxide films on metal.

Miyake, S., study of oxide films on metal surfaces with cathode-ray diffraction. II. Iron, chromium, nickel, and their alloys, B., 574.

See also Iitaka, I., and Trillat, J. J. Miyaki, K. See Ochiai, E. Miyama, R. See Nishida, K.

Miyamoto, S., influence of ultra-violet rays on rhythmic precipitation of silver chromate in an electric field, A., I, 132. Chemical reactions under the silent electric discharge. XV. Preparation of colloidal solutions. XVI. Reactions between hydrogen and solid inorganic compounds, A., I, 303, 470. Miyamoto, T. Seo Iwasaki, S.

Miyata, A., dielectric properties of Japanese lacquer film, A., I, 397.

Miyawaki, M. See Lauer, K.

Miyazaki, Y., thermal investigation of fusion of glass, B., 780.

Miyazi, S., synthesis of ursodeoxycholic acid, A., II, 500. Glyco-ursodeoxycholic acid from bear's bile, A., II, 500.

Miyoshi, M., salt-soluble phosphoric acid in volcanic ash soils, B., 595.

Mize, M. D. See Baker, J. C. Mizelle, J. D. See Graham, Robert.

Mizgajski, L. See Krause, A.

Mizugakl, K., reaction of embryonal chick heart to cocaine, procaine, tropacocaine, tutocaine, alypine, psicaine, and β eucaine with special reference to the

development of the heart, A., III, 217.
Mizushima, S., and Morino, Y., Raman
spectrum and molecular structure of benzene, A., I, 395. Raman spectra and molecular structure of ethane and its derivatives, A., I, 395.

Morino, Y., and Inoue, Y., polymerisation of styrene as revealed by Raman effect,

A., I, 283.

Morino, Y., and Kubo, M., dipole moment and Raman effect of molecules with groups capable of free rotation. II., A., I, 396.

Morino, Y., and Okamoto, G., Raman spectrum of deuteromethanol, A., I, 62. Uehara, Y., and Morino, Y., OH vibration spectrum in the photographic infra-

red, A., I, 281. See also Kozima, K., Kubo, Masaji, and

Morino, Y.

Mizuta, M., separation and identification of aromatic hydrocarbons contained in the xylene fraction of Syukkôkô crude.

II. and III., B., 11, 203. Mizuta, N., and Matsuura, T., existence in blood and urine of substances promoting liver function. II. Urine, A., III, 121.

Mizntseh, K. G., oxidation reaction occurring during reduction of aromatic nitrocompounds, A., II, 286.

Mladenovic, M., Manila elemi resin, A., II, 297. Elemic acid from Manila elemi resin. IX. Dihydroelemolic acid, A., II, 427.

Mnich, E., Polish phosphorite, B., 595. Mnookin, N. M., aliphatic polyamines, (P.), B., 1022.

and Synthetic Products, glycols, (P.), B.,

Moberly, G. S., report of Fibre Committee, B., 24. Sampling of crusher juice, B., 75.

Mobley, L. K., bacterial milk products, (P.), B., 391.

Mochalov, M. See Komar, A. P. Mochel, N. L., γ -ray radiography and its relation to X-ray radiography, A., I, 379.

Mochnacka, I. See Parnas, J. K. Mochnatsch, V. O., and Bagniuk, V. S.,

action of halogen compounds of arsenic and phosphorus on acetylenic carboxylie acids. I. Addition of arsenic chloride to tetrolic acid, A., II, 282.

and Stoliarov, A. I., geometrical isomerism of halogen substituted ethylenic acids. II. Addition of hydrogen bromide to tetrolic acid, A., II, 272.

Mocquot, G. See Simonnet, H. Modell, W., Gold, H., Winthrop, G.J., and Foot, E. B., sodium formaldehydesulphoxylate in experimental poisoning by mercuric chloride, A., III, 427.

Modern, F., and Ruff, G., concentration and purification of toxins and toxoids by ultrafiltration, A., III, 6. Polarimetry, refractometry, and protein content of immunised [anti-diphtheria] horse sera, A., III, 6.

Modzikowski, S. J., identifying explosive gases in small concentration, B., 747.

Moe, L. H., Craft, W. A., and Thompson, C. P., supplementing soil with iron and copper for prevention of anæmia in young pigs, A., III, 122.
Möbius, W. See Borst, W.
Moogle, E., blood meal [in Württomberg],

B., 82.

Möhl, H., [application of] expansion measurements in the control of crazing [on glazed pottery], B., 440.

Möhle, W. See Meyerhof, O. Möhring, W., apparatus for continuous distillation of high-boiling hydrocarbons

to coke, (P.), B., 1160.
Moehrle, E., Diesel and fuel oils from coal tar, B., 517. Diesel and fuel oils from bituminous coal tar, B., 751. Yields of oil and pitch from treatment of tar, B., 865.

Møller, C., capture of orbital electrons by nuclei, A., I, 109. Fermi's theory of positron disintegration, A., I, 341.

Möller, E. See under Wülfing, J. A. Möller, E. F., silage, B., 390.

Möller, H., and Roth, A., half-value widths of X-ray interference lines, A., I, 487. Determination of strains in welded and in cold-worked test-pieces by means of X-rays, B., 1218. See also Wever, F.

Møller, J., ion exchange with special reference to agricultural chemistry, B.,

Moeller, K. See Laves, F.

Møller, K. O., digitalis preparations, especially those in the [Danish] Pharmacopœia, B., 839.

and Stefansson, K., determination of small amounts of hydrocyanic acid, A., I, 326.

Möller, P., graphic method for determination of lattice constant of iron by means of cobalt rays, A., I, 603.

Møller, S., base-exchanging material for bringing about ion exchanges, (P.), B., 36, 343.

Moelwyn-Hughes, E. A., incorporation of thermodynamic variables in chemical kinetics, A., I, 85. Theory of electrokinetic effects in solution: reactions between ions and polar molecules, A., I,

Mönnig, H., electrode carbon from coal, B., 405. Electrodes from blends of bituminous coals, B., 998.

See also Free, G., and Winter, H. Mörath, E., properties and uses of synthetic agglutinants, B., 1381.

Mörike, E. See Lüers, H. Moerman, N. F., crystal structure of tri-

oxymethylene, A., I, 225. and Muller, G. J., transformations of higher orders, A., I, 291. See also Gerding, H., and Smits, A.

Möser, A., manufacture of vitrified bricks in ordinary brickworks, B., 782.

Moesveld, A. L. T., wrong mothods for establishing non-existence of polymorphy, A., I, 229.

Moffat, A. See Bergstrom, F. W. Moffatt, L. R. See Traxler, R. N. Moffett, G. L. See Heilbron, I. M. Moffit, F. H., geology of the Tonsina district, Alaska, A., I, 482.

Mositt, W. G., and Williams, E. H., determination of cyanide in aqueous extracts of road tars, B., 406.

Mofshin, B. See Clausen, H. J. Mogilanski, J. D. See Kozlov, N.

Mohalyi, G., forage value of Rhodes grass hay, B., 726.

Mohammad, A., diagnosis of oleiforous Brassica seeds, B., 1253.

Mohan, M., Keane, J., and Nolan, T. J. chemical constituents of lichens found in Ireland; Parmelia conspersa, Ach., A., III, 446.

Mohile, B. V. See Prasad, M. Mohler, F. L., electron concentration and spectral intensity distribution in a cæs-

ium discharge, A., I, 158.

Mohler, H., absorption of acetone solution in the short-wave ultra-violet, A., I, 216. Chemical warfare materials. IV. Absorption of $\beta\beta'$ -diehlorodiethyl sulphide in the short-wave ultra-violet. V. Discussion of the absorption bands of $\beta\beta'$ -dichlorediethyl sulphide, A., I, 217, 597. Absorption of R₁-R₁ systems. I. Spectra of cholestenone, cholestenoneoxime, mesityl oxide, pulegone, and carvono. II. Spectra of ergosterol, vitamin- D_z , $\Delta^{\beta 0}$ -decadiene, cholesterol, and isoprene, A., I, 217, 393. Absorption spectrophotometry of solutions in the short-wave ultraviolet, A., I, 266. Citric acid content of wines, B., 76.

and Forster, H., absorption spectra of permitted synthetic organic dyes [for

foodstuffs], B., 531.

Forster, H., and Schwarzenbach, G. molecular resonance systems. IV. Absorption spectra of sulphone-

phthaleins, A., II, 385. and Hämmerle, W., constitution and analysis of the bouquet substances of kirschwasser, B., 77. Cherry water [kirschwasser]. IV. Constitution and analytical characters of the bouquet

substance, B., 607.
and Lohr, H., absorption of R,-R,
systems. III. Spectra of A'-pmenthen-3-one, \hat{p} -xyloquinone, thujone, cyclohexanone, menthone, cyclopentanone, and cyclohexene, A., I,

597.

and Pólya, J., chemical warfare materials. II. Absorption of light in relation to chemical constitution. III. Spectroscopic identification, A., I, 61. Absorption spectra of aromatic esters, A., I, 165. Cherry water [kirsch-wasser]. V. Absorption spectrophotometry of wax and wax acids, B., 607.

Mohr, A., jun. See Wille, F. Mohr, C. B. See Nicolls, J. H. H.

Mohr, C. B. O., and Pringle, G. E., scattering of alpha-particles in helium, hydrogen, and deuterium, A., I, 438.

See also Massey, H. S. W. Mohr, H. See Dieckmann, H.

Mohr, M., nitrogenous constituents of the jellyfish Cyanea capillata, A., III, 295. Fate of guanidinoglyoxaline in the animal body, A., III, 382. Nitrogenous constituents of the muscle of the shark, Acanthias vulgaris, A., III, 416. Butter manufacture, B., 1261. See also Ackermann, D.

Mohr, R. See Goldstein, H.

Mohr, W., and Bitsch, judging and evaluating milk and milk products, B., 281. and Wellm, J., polarographic studies on milk-protein solutions, B., 80.

Moilliet, J. L. See Imperial Chem. In-

dustries.

Moinuddin, M. See Davies, J. G.
Moiseenko, V. M. See Chadshinov, V. N.,
and Schtraler, F. E.

Moiseev, A. See Kuznetzov, N. Moisev, V. G., water distillation apparatus, A., I, 380.

Moisik, M. R., modification of coking properties of coal under the influence of high-frequency currents, B., 199.

Mojen, H. P., isoprene and rubber. XLVII. Degradation of rubber by acids, B.,

See also Staudinger, H. Mojmir, T. See Welter, G. Mokeet, A. See Doja, M. Q.

Mokruschin, S. G., Demjanova, N. M., and Konjaev, P. S., laminar systems. IV. Hardy effect and the stability of multimolecular layers of copper sul-

phides, A., I, 26.

and Konjaev, P. S., laminar systems. III. Kinetics of formation of copper hydroxide films on the surface of solutions of complex tetrammino-copper salts. IV. Kinetics of formation of eupric hydroxide layers at surface of cuprammonium solutions, A., I, 26, 88.

Krilov, E. J., and Choviakova, G. F., laminar systems. XI. Formation and properties of thin sulphur films on the surface of copper chloride solutions,

A., I, 358.

and Vilesova, G. F., laminar systems. V. Adsorption of electrolytes on films

of copper sulphide, A., I. 26.

Moldavski, B. L., Kamuscher, G. D., and Kobilskaja, M. V., catalytic cyclisation of aliphatic compounds. I. Cyclisation of aliphatic hydrocarbons in presence of chromic oxide, A., II, 181.

Kamuscher, G. D., and Livschitz, S., dehydrogenation of cyclohexane by sulphide and oxide catalysts, A., II,

181.

Moldavsky, L. F., and Gellhorn, E., relation between hypoglycamia and anoxamia, A., III, 289.

Moldenhauer, F. See Reichert, B. Mole, G., ignition of explosive gases, A., I,

Moles, E., at. wt. of iodine, A., I, 57. Limiting density method for deter-mining mol. wt. of gases, A., I, 379. and González de Barcia, J., hydrates of

aluminium perchlorate, A., I, 194. and Sancho, J., limiting density and mol. wt. of ammonia; at. wt. of

nitrogen, A., I, 338.

and Toral, (Schortta) T., molar ratios $CO_2: O_2$ and $N_2O: O_2$; at. wt. of carbon and nitrogen, A., I, 57.

and Vian, A., vapour pressures of aluminium iodide, A., I, 176.

and Villan, P., I₂O₅ and its hydrates. III., A., I, 195.
Molinari, C. See Luzzati, S. Molins, D. W., and Molins Machine Co.,

apparatus for testing moisture content of solid substances, (P.), B., 991. Drying of cut tobacco or similar substances, (P.), B., 991.

Molins Machine Co., Ltd. See Molins, D. W.

Molinski, S., sulphuring fresh beet cossettes, B., 1109.

Molitch, M., body build factor in basal metabolism of boys, A., III, 126. and Cousins, R. F., dinitrophenol in treatment of ichthyosis, A., III, 171.

and Poljakov, S., cholesterol metabolism in children with and without endocrine dysfunctions, A., III, 211.

Molitor, H., comparison of [the pharma-cological properties of] five choline compounds used in therapeutics: acetyl-, acetyl- β -methyl-, carbaminoyl-, ethyl ether of β -methyl-, and carbaminoyl- β methylcholine chloride, A., III, 93.

Moll, F., tar oil for wood impregnation, B., 202.

Moll, G. See Schafmeister, P.

Moll, H. See Bauer, K. H.
Moll, W. L. H., swelling and solubility of cellulose derivatives and their relations to dielectric constants, A., I, 28.

and Fuller, G. W., system benzylcellulose-benzene-ethyl alcohol. I. and II., A., I, 356, 560.

Mollet, P. See Errera, J.

Mollwo, E., electron conductivity and halogen excess in alkali halide crystals, A., I, 395.

Molnar, K. See Silberstein, F. Molobad, M. C., and Varga, F. B., charts for gas-flow measurement, B., 854.

Molodenski, V., and Michailov, N., preservation of rubber against deteriorating action of copper compounds, B., 373.

Moloney, A. H., and Hertz, R., evipal in prolonged anæsthesia, A., III, 136.

Molt, E. L., velocity of the Cannizzaro reaction, A., II, 195.

Moltschanov, S. P., application of mercury cathode to determination of aluminium, A., I, 332.

Moltschanov, V. S. See Tverdovski, I. P. Moltschanova, R. S. See Dimov, A. M.

Molvig, H. See Stern, A. Momonoi, K., post-mortem change in liver, A., III, 212.

Momose, I. See Sakuma, I. Momose, T. See Asahina, Y.

Monadjémi, M., materialisation of energy of β -rays from thorium-B+C, A., I, 389. Materialisation of energy of β-rays, A.,

Monaghan, (Miss) B. R., and White, H. L., adsorption at surfaces of red cells, A., III,

Monaghan-Watts, B., whipping ability of soya-bean proteins, B., 1265. Monarca, C. J., and Lynn, E. V., acorns of

Quercus rubra, A., III, 332.

Monblanova, V. V. See Kobosev, N. I.

Monchal, S. See Lumière, A.

Moncrieff, R. W. See Brit. Celanese.

Mond Nickel Co., Ltd., and Allman-Ward, F. H., distribution of liquids over surfaces for heat exchange and other purposes, (P.), B., 301.

and Pfeil, L. B., [nickel] alloys, (P.), B.,

Mondain-Monval, P. See Paris, R. Monden, H., and Skroch, K., evolution of gas on annealing [steel] sheets, B., 919.

Monden, S. See Kita, G. Mondiez, A., calculation of conduits for fluids taking account of heat exchange; gas under pressure, steam, hot gases, chimneys, and thermosiphon, B., 854.
Moness, E., and Christiansen, W. G.,

bromoalkyl derivatives of salicylic acid, A., II, 418.

Moneta, G. B. See Cassol, B. Money, R. W. See Lampitt, L. H. Mong, L. E. See Heindl, R. A.

Monguillon, P. See Lemoigne, M. Monk, G. S. See Landahl, H., and Lieberman, L

Monk, R. H., Ross, A. S., and Amer. Zinc, Lead & Smelting Co., titanium dioxide, (P.), B., 437.

Monnier, M., gonadotropic hormone of the anterior pituitary lobe in cerebral tumours and encephalic diseases, A., III, 89.

See also Bourguignon, G.

Monnier, P., determination of total lipins and their constituents in small amounts of tissues, A., III, 334.

See also Cristol, P.

Monoyer, A., laboratory culture of "sugarfactory gum"; effect of "accessory substance" on the growth of "sugar-factory gum," A., III, 225.

Monro, W. E., and Dumbrell, J. W., treatment of charges supplied to internalcombustion engines, (P.), B., 1014.

Monsanto Chemical Co., ketodicarboxylic acids and their lactones, (P.), B., 23. o-Benzylsalicylic acid and derivatives,

(P.), B., 218. Anhydrous ferric sulphate, (P.), B., 343.
See also Alt, A., Bartram, T. W., Beaver, D. J., Bertsch, J. A., Carswell, T. S., Conover, C., Dvornikoff, M. N., Kaufmann, H. P., Kyrides, L. P., Magoun, G. L., Mares, J. R., Martin, G. D., Scott, W., and Sibley, R. L.

Monsanto Petrolenm Chemicals, Inc. See Hochwalt, C. A., and Thomas, C. A. Monselise, G. G., and Scaccabarozzi, G.,

lead thioaluminates, A., I, 628. See also Cambi, L.

Montagne, (Mlle.) M., and Garry, (Mlle.) M., action of organo-magnesium compounds on benzilanils, A., II, 424.

"Montecatini "Società Generale l'Industria Mineraria & Agricola, recovery and utilisation of gases which escape from carbon disulphide works, (P.), B., 910. Recovery of volatile solvents in extraction plants for oils and fats, (P.), B., 1235.

Montfort, C., does combined action of all

spectral colours in white light increase the photosynthetic activity of the individual colours? A., III, 240

Montgomerie, J. A., and Archibald, P. K., road-surfacing or like material, (P.), B., 349. Bituminous emulsions, (P.), B., 411.

See also Internat. Bitumen Emulsions. Montgomery, A. E., influence of air on

[machine] drying [of paper], B., 770. Montgomery, A. W. See Harding, W. H. Montgomery, C. G., and Montgomery, D. D., heavy particle component of cosmic radiation, A., I, 59. Nature of soft component of cosmic radiation, A., I, 213.

Montgomery, C. W., McAteer, J. H., and Franke, N. W., catalytic isomerisation of n- and iso-butane, A., II, 437.

Montgomery, D. D. See Montgomery, C. G. Montgomery, E. See Emeléus, K. G

Montgomery, (Miss) E. M., Hann, R. M., and Hudson, C. S., crystalline acetal derivatives of d-arabinose, A., II, 324. and Hudson, C. S., crystalline a methyld-arabinofuranoside, A., II, 324.

Montgomery, E. W. See Koppers Co. of

Delaware.

Montgomery, G. L., medium-pressure compressors, B., 854.

Montgomery, $H_{\cdot,\cdot}$ and Pierce, $J_{\cdot,\cdot}$ $A_{\cdot,\cdot}$ site of acidification of urine within the renal tube in amphibia, A., III, 386.

Montgomery, H. A. See Sweeney, O. R. Montgomery, H. B. S., Fomes fraxineus and its effects on ashwood, A., III, 160.

See also Moore, M. H.

Montgomery, J. W., milling characteristics of new seedling [sugar] canes, B., 1391. Montgomery, M. See Farnsworth, W. H. Montgomery, S. A. See Standard Oil Co., and Standard Oil Co. of Indiana.

Montgomery, T. N. See Imperial Chem. Industries.

Monti, (Signa.) L., action of formaldehyde on hydroxyquinolines. A., II, 116. Oxidising action of selenium dioxide. II., A., II, 166. Nitration of polycyclic aromatic hydrocarbons by means of nitrous fumes, A., II, 184. and Cirelli, (Signa.) V., preparation of

2-hydroxy-4-methylquinolines,

II, 116.

and Dinelli, D., action of formaldehyde on hydroxyquinolines. II., A., II, 116.

Monti, N., volatile acids of butter fat of cows fed with rice bran, B., 181.

Montignie, E., mercury vanadates and xanthates, A., I, 92. Action of ammonium chloride on sulphides, A., I, 92. Action of ammonium chloride with nitrie acid on various compounds, A., I, Action of chlorides on oxides, A., I, 95. Selenium iodides, A., I, 147.
Mercurous fluoride, A., I, 194. Thallium phosphide, A., I, 195. Bismuth dichloride, BiCl₂; existence, methods of formation, and properties, A., I, 258. Uranyl salts, A., I, 373.

Montoro, V., and Massagrande, B., tem-

perature coefficient of electrical resistance in aluminium conductors, B.,

1363.

Montreal Club, adsorption of metallic driers by pigments, B., 156.

Montrose Chemical Co. See Rothberg, P. Monypenny, J. H. G., columbium [niobium] as an alloy in corrosion-resisting steels, B., 680.

Monzer, A., compound metal bodies, (P.), B., 932.

Moodey, C. R., and Lowman, A., laboratorymade blast lamp, A., I, 48.

Moody, A. H., and Harrington, J. A. heat losses in flue gases of stoker-fired boilers, B., 196. Moody, I. W. See Selle, W. A.

Mookerjee, S. L. Seo Wilson, H. E. C. Mookherji, A. See Krishnan, K. S.

Moon, C. L. See Scofield, C. S.

Moon, F. E., and Thomas, B., digestion of huskless oats by poultry, B., 1129.

Moon, H. D., preparation and assay of adrenocorticofropic hormone, A., III,

Moon, H. H. See Culpepper, C. W.

Moon, P. B., Geiger-Müller counters, A.,

Moon, R. J., and Harkins, W. D., electronic analysis of surfaces by means of slow electrons, A., I, 69.

Moon, V. H., mechanism of acute inflam-

mation, A., III, 419. Lieber, M.M., and Kennedy, P.J., histamine and leucocytosis, A., III, 109. Mooney, J. L. See Burgwald, L. H.

Mooney, M., rheology of raw rubber, B.,

Mooney, T. F., and Ludowici-Celadon Co., mineral wool furnace, (P.), B., 1224.

Moor, V. G., Frost, A. V., and Schilaeva, L. V., thermal reactions of unsaturated hydrocarbons. II. Kinetics and mechanism of thermal reactions of

Δβ. butene, A., II, 316.
Strigaleva, N. V., and Frost, A. V., thermal reactions of unsaturated hydrocarbons. III. Thermal transformation of propene, A., II, 316.

Mooradian, V. G., and Norton, J. T., effect of lattice distortion on diffusion in

metals, B., 50.

Moore, A., and Piddlesden, J. H., "Subur" type smoke-houses [for rubber], B., 948. Moore, B., fused silica in the laboratory,

A., I, 635. and Barton, T. H., concentration of phosphoric acid, B., 1042.

and Brown, R., application of fused silica in heating processes. III. Heaters and radiants, B., 136.

Moore, C. C., and Vacuodri Fruit Corp., drying of fruit, (P.), B., 84.

Moore, C. E., identifications of solar lines, A., I, 336.

Moore, C. H., jun., staurolite area of Patrick and Henry Counties, Virginia, A., I, 587.

Moore, C. L., matt rayon; titanium dioxide as a delustrant; delustring as an aftertreatment, B., 124, 655.

Moore, C. R. See Wells, L. J.

Moore, E., and Wilson, D. W., identification of a compound isolated from scallop mussel, A., III, 8. Nitrogenous extractives of scallop muscle. I. Isolation and structure of octopine. II. Constituents of the muscle, A., III, 339.

Moore, E. K., [fat] spew on glazed kid

leather, B., 475 See also Roddy, W. T.

Moore, E. W., oxygen demand of mixtures of activated sludge and sewage, B., 733. See also Fair, G. M.

Moore, G. A., and Smith, D. P., occlusion and diffusion of hydrogen in metals; metallographic study of nickel-hydrogen, A., I, 296.

Moore, G. C., soil and plant response to certain methods of potato cultivation, B., 822.

See also Smith, O.

Moore, G. L. See Aluminum Co. of America.

Moore, G. V. See Dow Chem. Co. Moore, H. F., how and when does a fatigue crack start? B., 247. Internal fissures induced in [steel] rails by soaking in hydrogen, B., 1351

Wishart, H. B., and Lyon, S. W., slow bend and impact tests of notched

[metal] bars, B., 793.

Moore, H. K., and Brown Co., caustic soda, (P.), B., 342. Evaporation, (P.), B., 634. Moore, J. G. See Imperial Chem. Industries. Moore, M. H., control of strawberry mildew

(Sphaerotheca humuli), B., 825. and Montgomery, H. \hat{B} . \hat{S} ., combined fungicide-insecticide sprays in 1936, B., 826. Fungicidal and phytocidal properties of new chemical preparations. I. Fungicidal properties, B., 826.

Moore, N. C. See Dubilier Condenser Co. Moore, O. C. See Schreiber, W. T. Moore, P. See Nikitin, A. A.

Moore, R. A. See Hellman, L. M. See Vance, A. J.

Moore, R. C. Moore, R. G. D., and Hibbert, H., lignin and related compounds. XXVIII. Behaviour of lignin towards activated hydrogen, A., II, 69.

Moore, R. J., synthetic resins in varnishes for wood protection, B., 155. Fortifying effectiveness of phenolic resins, B., 589.

Moore, R. M., and Greenberg, M. M., acid production in functioning heart under conditions of ischæmia and of congestion, A., III, 373.

Moore, R. S., and Columbia Ribbon & Carbon Manufg. Co., metallic-coated membrane, (P.), B., 537.

Moore, R. W., selection of lubricants for cold-rolling of strip steel, B., 642. See also Kinzel, A. B.

Moore, S., apparatus for use in the discharge of materials from [coking] retorts,

etc., (P.), B., 1300.

Moore, T., vitanin-A and carotene. XIII. Vitamin-A reserve of the adult human being in health and disease, A., III, 76. Spectroscopic changes in fatty acids. III. Biological activity of acids of linseed oil in different spectroscopic states, A., III, 91.

See also Cruickshank, E. M., Davies,

 $A.\ W.$, and Ellison, $J.\ B.$ Moore, $T.\ V.$ See Standard Oil Development Co.

Moore, W., determination of soil reaction, B., 1383.

and Tobacco By-Products & Chem. Corp., insecticide material, (P.), B., 604. See also Hendrick, J.

Moore, W. D., powdery mildew (Erysiphe polygoni) on garden snap beans, B., 1105.

See also Cooper, H. P.

Moore, W. E., Simpson, G. L., and Pittsburgh Res. Corp., burning of carbonates [with recovery of carbon dioxide], (P.), B., 668.

Moore, W. F. See Texas Co.

Moore Dry Kiln Co. See Battenfield, D. R. Moorhouse, A. T., dry extract of stramonium, B., 86.

Moorhouse, S., [apparatus for] preparation of jute, hemp, flax, and analogous tow rovings, (P.), B., 1194.

Moorhouse, W. R. See Nat. Aniline &

Chem. Co.

Moorman, A. R., Carpenter, I. C., and Contact Filtration Co., treatment of fresh unused petroleum oils to produce decolorised lubricating oil stocks, (P.), B.,

Moorman Manufacturing Co. See Elmslie, W. P.

Moorshead, W. A., proposals for a standard basis for the expression of tank-furnace performances, B., 438.

Moorthy, T. S. K. See Dasannacharya, B. Moose, J. E., and Swann Res., mono-ammonium phosphate, (P.), B., 543. Diammonium phosphate, (P.), B., 543. Wax-like dielectric composition, (P.), B., 1230.

Mora Gues, B. J., carbohydrate metabolism in pregnancy, A., III, 257.

Moraczewski, W. von, and Jankowski, H. effect of calcium salts on fat content of blood, A., Ill, 452.

Moragues-Gonzalez, V. See Michaelis, L. Morais, E. See Fanzères, A. Moran, C. See Collins, J. R.

Moran, J. A. See Ryan, V. H.

Moran, R. C., Evers, W. L., Fuller, E. W., and Socony-Vacuum Oil Co., petroleum lubricant product, (P.), B., 1306. Petroleum product, (P.), B., 1306. Lubricant, (P.), B., 1306.

and Socony-Vacuum Oil Co., mineral oil

composition, (P.), B., 873.

Moran, R. P., purifying argon for filling incandescence lamps, B., 665.

Moran, T., adsorption of salts by proteins, A., I, 134. Gas storage of eggs, B., 613. Effects of carbon dioxide on fertile eggs, B., 1262. Storage of frozen poultry, B., 1263. and Wright, N. L., store-burn in frozen

meat and poultry, B., 1263.

Moran, W. G. See Parks, W. G.

Mordecai, W. E., foundry coke, B., 744. Morduschenko, C. V. See Korenman, I. M.

More, K. R., Humphreys, R. F., and Watson, W. W., trap for use with oil diffusion pump, A., I, 537.

and Rieke, C. A., wave-length standards in the extreme ultra-violet, A., I, 53. Moreau, F., cation antagonism in cultures

of Saprolegnia, A., III, 71.

and Moreau, (Mme.) F., toxicity and antagonism of some anions in cultures of Saprolegnia, A., III, 328.

Moreau, (Mme.) F. See Moreau, F. Moreau, L., and Aubertin, A., practical system of purification of brewery

effluent, B., 93.

and Vinet, E., vigour of vines in relation to soil, manure, and certain diseases, B., 170. Treatment of fruit trees against codling moth and scab in the Vale of Loire, B., 1389. Determination of true preservative value of sulphurous acid in musts and wines by the iodine indicator method, B., 1395. Variations in the true preservative value of sulphurous acid in musts and wines according to their acidity, B., 1395. Practical consequences in the ease of de-acidification, B., 1395.

Moreau, Leon. See Portevin, A.

Morel, A., Rochaix, A., Perrot, L., and Sanlaville, S., antiseptic action of organic sulphur compounds on cultures of pathogenic organisms, A., III, 101. See also Arloing, F., and Mouriquand, G.

Morel, C., flocculation of serum-colloid mixtures in a salt-free medium, A.,

III, 83.

See also Charpentier, P. G., Doladilhe, M., and Placidi, L.

Moreland, F. B., composition of blood of the turtle following complete anoxia, A., III, 109.

Moréll, S., and Schwartzman, G., use of dialysis in preparation and purification of immunologically active bacterial products, A., III, 413.

 $\begin{array}{lll} \textbf{Morelli,} \ A. & \textbf{See Cartenl,} \ A. \\ \textbf{Morena,} \ J. & \textbf{See Roche,} \ J. \\ \textbf{Morenko,} \ G. \ F., \ \textbf{metallisation of electrodes} \end{array}$ for electric furnaces, B., 693.

Moreno, G. G., colour photography and

kinematography, (P.), B., 1410.

Moreno Martin, F., and Suárez Peregrin, E., semi-micro-determination of blood-

sugar, A., III, 113. Moressée, G., electric welding, B., 577. Moreton, H. H., [coal] briquettes, (P.), B.,

Morey, G. W., silicate science, B., 1204. and Ingerson, E., melting of danburite: liquid immiscibility in the system $CaO-B_2O_3-SiO_2$, A., I, 186.

Morey, G. W., and Merwin, H. E., phase equilibrium relations in the binary system sodium oxide-boric oxide, with measurements of the optical properties of the glasses, A., I, 30.

Morgan, A. F., and Greaves, E. O., nutritive values of "Glaxo" and "light white "caseinogens, A., III, 420. Kimmel, L., and Hawkins, N. C., com-

parison of hypervitaminoses induced by irradiated ergosterol and fish-liver oil concentrates, A., III, 440.

Morgan, C. E., extraction of minute amounts of morphine, B., 1132.

Morgan, (Sir) G. T., modern developments in plastics, B., 259.

and Burstall, F. H., residual affinity and co-ordination. XXXVII. Complex metallic salts containing 2:6-di-2'-pyridylpyridine (2:2':2"-tripyridyl), A., II, 523.

and Davies, G. R., germanium and gallium in coal ash and flue dust, B., 1291. and Megson, N. J. L., alkylphenols and related compounds, (P.), B., 528. Laminated boards, (P.), B., 1324.

and Pettet, A. E. J., phenolic and other constituents of aqueous liquors from coal carbonisation, B., 515.

and Pratt, D. D., plastic materials from rubber and tar products, B., 1236.

and Stewart, (Miss) Jessie, cyclic 1:3-diazalines, A., II, 390. Bases derived from a-aminopyridine, (P.), B., 421.

Morgan, H. See Kress, O. Morgan, I. C. See Brown, Arthur G. Morgan, J. E., and Nielsen, W. M., cosmicray shower production and absorption in various materials, A., I, 59.

Morgan, J. S., distillation of coal and other carbonaceous material, (P.), B., 1009. Morgan, K. Z., and Nielsen, W. M., shower

production under thick layers of various materials, A., I, 595. Shower production in various materials, A., I, 595.

Morgan, L. B. See Imperial Industries.

Morgan, M. F., soil and plant-tissue tests for minor element constituents, B., 1099. Morgan, (Miss) N. M. E. See Cullinane,

N. M.

Morgan, P. F., Durdin, A. C., and Spiegel, M., sewer-flushing prevents bulking of activated sludge at Flora, Illinois, B., 191.

Morgan, R. S., and Pritchard, H., average vitamin-A and -D potency of butter,

Morgan, S. O. See White, Addison H. Morgan, T. N., and Davidson, S. G., action of corpus luteum hormone on human menstrual cycle, A., III, 278.

Morgan, W. A. See Keenen, F. G.
Morgan, W. L. See Griffiths, E.
Morgan, W. M. See Clemo, G. R.
Morgan, W. T. J., immuno-chemistry.

II. Isolation and properties of a specific antigenic substance from B. dysenteriæ,

Shiga, A., Ill, 487. Morgan, W. W., spectral classification of the stars of types A to K, A., I, 487.

Morgan Crucible Co., Ltd., Perry, R. J., and Wiggs, A. E., carbon brushes for electrical apparatus, (P.), B., 361.

Morgenroth, E. See Opitz, K. Morgenstern, G. See Feher, F., and Simon, Arthur.

Morghen, I., exact determination of two organic compounds in presence of each other, A., II, 172.

Morghen, I. See also Wacek, A. von. Morguleff, (Mlle.) N. See Rosen, B.

Morgulis, N. D., thermal theory of cathode sputtering and emission of secondary electrons, A., I, 3. Ionie space charge and its neutralisation by electrons, A., I, 7. Accommodation coefficient of positive ions on the surface of a probe electrode, A., I, 210.

Bernadiner, M. P., and Patiocha, A. M., dependence on temperature of cathode

sputtering, A., I, 120.

Morgulis, S., [with Wagner, B.], glycolysis in blood. III. Glycolysis and glutathione, A., III, 412. and Spencer, H. C., blood and tissues in

nutritional muscular dystrophy, A., III, 209. Metabolism in nutritional muscular dystrophy, A., III, 209. Dietary factors concerned in nutritional muscular dystrophy, A., III, 283.

See also Dunn, E. E., and Spencer, H. C. ori, H. See Negishi, M.

Mori, H. Mori, K. See Kotake, M.

481.

Mori, T., Okunuki, K., and Yakushiji, E., catalytic oxidation of cytochrome-c by various polyphenolases, metal-complex salts, and pyridine-hæmin, A., III,

See also Yakushiji, E. Moricourt, H. See Peyre, E.
Morikawa, I. See Hayashi, M.
Morikawa, K., mercury-sensitised reactions

of methane, deuteromethanes, and the

hydrogen isotopes, A., I, 574.
Benedict, W. S., and Taylor, H. S., mercury-sensitised reactions

methane, deuteromethanes, and the hydrogen isotopes, A., I, 317.

Trenner, N. R., and Taylor, H. S., activation of specific linkings in complex molecules at catalytic surfaces. III. Carbon-hydrogen and carboncarbon linkings in propane and ethylene, A., I, 418.

See also Benedict, W. S., Ishikawa, F., and Trenner, N. R.

Morin, G., and Vial, J., intensification of hypotensive action of acetylcholine by yohimbine, A., III, 93.

See also Hermann, H., and Jourdan, F. Morinaga, K., hydrogen atom in terms of

wave geometry, A., I, 546.
Morino, Y., and Mizushima, S., raman effect and dipole moment in relation to free rotation. VII. Quantum mechanical resonance in carboxylic acids. IX. Rotation around the S-S bond, A., I, 396, 496.

See also Kubo, Masaji, and Mizushima, S.

Morioka, S. See Endô, H.

Morisima, N. See Noda, T. Morison, R. S., and Rosenblueth, A., action of eserine and prostigmine on skeletal muscle, A., III, 93.

Morita, K., coating of glass sheets, (P.), B., 551.

Morita, N., and Titani, T., heavy oxygen content of carbohydrates, A., I, 41. Catalytic isotope exchange between water and oxygen, A., I, 251.

Morita, T. See Masaki, O. Moritz, A. J. L., Schilthuis, J. J., and Amer. Enka Corp., artificial silk and byproduct recovery therefrom, (P.), B., 772.

Moritz, H., and Schneiderhöhn, P., rapid spectral determination of tin in ores, B., 48.

Moritz, M. R., and Metropolitan-Vickers Electrical Co., flux-coated electrodes for electric arc-welding, (P.), B., 458. See also Metropolitan-Vickers Electrical Co.

oritz, R., superphosphate or mixed fertilisers, (P.), B., 238. Moritz.

Moriya, T., and Tabata, K., thermal endurance of glass, B., 545. See also Tabata, K.

Moriyama, M., naphthalene cataract of

the lens of the eye, A., III, 89.

Morland & Impey, Ltd. See Impey, F. L.

Morosova, F. N. See Weissfeiler, J.

Moroy, (Mlle.) J., difference between apparent and true strength of alcoholic beverages, B., 831.

Moroz, K. N., rapid determination of silicon in cast iron, B., 444. Determination of phosphorus in cast iron, B.,

Moroz-Morozenko, M. G. See Smirnov, A. I.

Morozov, A. A. See Rindin, T. V. Morozov, G. A. See Dobretzov, L. N. Morozov, I. S. See Urazov, G. G. Morozov, N. M., kinetics of sorption. II.

Sorption of carbon monoxide on alumina, Λ., I, 611.

See also Kagan, M. J.

Morrell, J. \tilde{C} ., non-structural activated carbon, (P.), B., 318.

See also Egloff, G., and Universal Oil Products Co.

Morrell, R. S., chemistry of drying oil films, B., 1087.

and Davis, IV. R., highly unsaturated acids in oiticica oil, B., 257.

Morris, A. J. See Wilster, G. H. Morris, C. J. U. R. See Kuhn, R.

Morris, D. D., Sutherland, B. P., and Wright, C. H., fluorine control and

recovery, B., 1200.
Morris, H. J., and Calvery, H. O., determination of arsenic in small amounts in biological materials, A., III, 504.

Morris, R. C., and Adams, R., structure of gossypol. III. Gossypol ethers, A., II, 463.

See also Campbell, K. N.

Morris, S., dairy science; physiology of

dairy cattle. II., A., III, 172.
and Acton, W., dry animal-protein substances, (P.), B., 186.
Wright, N. C., and Fowler, A. B., nutritive value of proteins for milk production. IV. Comparison of proteins of spring and autumn grass, grass conserved as silage (A.I.V. acid-treated, molasses-treated, and ordinary untreated), and grass conserved by drying, B., 184.

See also Blackwood, J. H. Morris, T. N., acid test for tinplate, B., 1221. Effect of methods of storage on pectin in orange peel, B., 1264. Lemon peel, B., 1264. Pectin icllies from dried albedo of lemons, B., 1264.

and Bryan, J. M., corrosion of tinplate container by food products. II., B., 144.

See also Zilva, S. S. Morris, V. H. See Sayre, J. D.

Morrison, D. B., and Hisey, A., preparation of hæmoglobin in a dry and active state, A., III, 110.

Morrison, D. R. See Dewar, J. Morrison, F. B. See Miller, J. I. Morrison, F. R. See Penfold, A. R. Morrison, $H_{\cdot,\cdot}$ laboratory apparatus, (P.), B., 1150.

Morrison, J., rubber in compression, B., 814.

Morrison, J. O. See Harned, H. S. Morrison, O. C., photographic emulsion, (P.), B., 500.

Morrison, P. J. See Riegel, C.

Morrison, S. See Krantz, J. C., jun. Morrison, T. J. See Ross, J. D. M. Morrow, D. G. See Hercules Powder Co.

Morrow, G. See Clifton, C. E.

Morschanski, F. P., determination of hardness by a dynamic apparatus with a ball point, B., 400.

Morse, D. S., adhesive, (P.), B., 819. Morse, E. H. See McKee, R. H. Morse, F. W., soil nitrogen, B., 272.

Morse, J. F., turbidimetric titration of gelatin suspensions, B., 375. See also Clayton, W.

Morse, P. M., Fisk, J. B., and Schiff, L. I., collision of neutron and proton. I. and II., A., I, 6, 339. See also Fisk, J. B.

Morse, S., heat distribution, (P.), B.,

Morsing, J., electrolysis with a mercury cathode [as a method] for analysis of iron and iron alloys and its application to the determination of total aluminium in steel, B., 1062.

Morsman, H., Steiger, M., and Reichstein, T., degradation of cholic acid to 3:7:12trihydroxypregnan-20-one, A., II, 105.

Mortensen, C., heat-exchange apparatus, (P.), B., 991.

Mortimer, G. B., and Ahlgren, H. L., influence of fertilisation, irrigation, and stage and height of cutting on yield and composition of Kentucky bluegrass (Poa pratensis, L.), B., 168.

Morton, A. A., and Hechenbleikner, I., condensations by sodium. VIII. Solvent exchange reactions, preparation of phenylmalonic acid, and mechanisms of reactions which employ sodium, A., II, 101.

and Stevens, J. B., dyes of the triphenylmethane series and related substances, (P.), B., 1031.

See also Clapp, D. B.

Morton, B. See Carter, W. W.

Morton, C., visual balance-detectors for conductance bridges, A., I, 266. and Harrod, D. C., assay of saccharated iron compounds, B., 86.

See also Kapitza, P.

Morton, F. See Nussbrecher, A. M. Morton, H. A., age-resisting vulcanised rubber and antioxidant agent, (P.). B., 1246.

Morton, J., [compound] fabrics, (P.), B., 428.

and Jones, J. I. M., bobbins used for dyeing or otherwise treating with liquids yarns, threads, or fibres, (P.), B., 1198.

Morton, R. A., spectroscopic determination of vitamin-A, A., III, 324.

See also Edisbury, J. R., Lovern, J. A., and Pritchard, H.

Morton, W. A., and Amco, Inc., luminous-

flame heating, (P.), B., 1301.

Spencer, H. F., and Amco, Inc., continuous [heating] furnace, (P.), B., 1070.

Morton & Co., Ltd., R., and Rawlins, G. A., spargers or sprinklers, (P.), B., 306. Morton Salt Co. See Hardy, E. C.

Moruzzi, G., blood-bromine during sleep, A., III, 166. Bromine content of various organs, A., III, 167. See also Margaria, R.

Mosallam, S. See Bangham, D. II.

Moschkin, A., utilisation of mother-liquors from crystallisation of nickel formate, B., 1045. Influence of admixtures on activity of nickel formate catalysts, B., 1045.

and Zvereva, V., "refining" of spent hydrogen, B., 906.

Moschkov, B. S., photoperiodism and a hypothesis as to hormones of flowering, A., III, 329.

Moser, A. See Machatschki, F.

Moser, E. See De Diesbach, H.

Moser, F., compacting of plastic, granular, and similar materials, (P.), B., 4.

Moser, F. R. See Shell Development Co.

Moser, H., excitation of mercury by collision with slow positive mercury ions, A., 1,54. Mercury-thallium alloys and their use for thermometric purposes, A., I, 73.

Moser, J. R. See De Coriolis, E. G. Moses, F. G., Hess, R. W., and Perkins, R. L., flotation of [copper] minerals,

(P.), B., 250.

Mosettig, E., and Duvall, H. M., phenanthrene series. XIV. Preparation of 1- and 4-phenanthrol, A., II, 145. Sec also Burger, A.

Mosgovoi, A. A. See Tschapek, M. V. Mosheiko, A. M., solonetzous chestnut soils of the Ukraine and their reclam-

ation, B., 953. Mosher, H. H., micellar structure of rayon

in relation to dyeing; newly developed theories in scouring and dyeing, B., 773. Mosher, W. A., Saunders, D. H., Kingery, L. B., and Williams, R. J., nutritional requirements of the pathogenic mould

Trichophyton interdigitale, A., III, 223. Mosig, A., pectin as a substitute for foreign ointment bases, B., 285.

Moskovits, A. See Jacquemain, R. Moskovits, E., treatment of auriferous minerals from quartzite lodes, B., 685.

Moskovitz, B. See Kolthoff, I. M. Moskvin, D. G., special type of fluted filter, A., I, 268.

Moskvin, G. M. Sco Alexeevski, E. V. Moss, A. H. See Newell & Co., Ltd., E. Moss, A. R., analysis of banana oil, B., 366. Moss, C. R., refuse collection and disposal, B., 397.

Moss, H. H. See Linde Air Products Co. Moss, H. V., and Swann Research, Inc., granular-product conditioner and products sugar] made therewith, (P.), B., 276. Moss, W. H. Sce Brit. Celanese.

Mossini, A., cestrogenic activity in a lignite from Emilia [Italy], A., III, 402. Derivative of theophylline: 1:3-dimethylxanthine-ethylenediamine (tefamin), B., 87.

Mossoux, R., tests on spring materials considered as a basis for design calculations, B., 919.

Mosters, J, increase in esterase content of blood after oral administration of ascorbic acid, A., III, 311.

Moszew, J. See Dziewoński, K. Mothes, K., and Pietz, J., physiology of symbiosis in Leguminosæ, A., III, 239. Motley, H. L. See Ellis, M. M.

Motoc, D. See Zaharia, A.

Motok, G. T., new tool for control of quality in steel-making, B., 1213.

and Waltz, E. O., determination of aluminium and alumina in steels, B., 681. Motovilova, N. N., bibliography of patents on synthesis of raw materials used in preparation of synthetic rubber, on polymerisation of these substances, and their application to synthetic rubber, B., 1378.

Motschan, I., Roginski, S., Schechter, A., and Theodorov, P., chemical reactions in electric discharges. II. Formation of ammonia by collision with positive ions,

A., I, 38. Mott, G. A., Jones, C. C., and Lynn, H. S., solvent-recovery device, (P.), B., 119.

Mott, N. F., resistance and thermo-electric properties of transition metals, A., I, 19. Energy of superlattice in β -brass, A., I, 356. Conduction of electricity in solids, A., I, 395. Theoretical interpretation of optical constants of copper-zinc alloys, A., I, 455.

and Potter, H. H., sharpness of the magnetic Curic point, A., I, 227.

See also Gurney, R. W., and Jones, H. Mott, R. A., production and utilisation of domestic coke; production of reactive coke in coke ovens, B., 103. Preparation of coal, B., 859.

and Spooner, C. E., coke formation. XIII. Swelling power of coal, B., 200. See also Hiles, J, and Spooner, C. E.

Mott, W. A., jabon cochi: native soap of

Guatemala, B., 1078.

Mottram, J. C., and Palmer, N., factors determining rickets in rats fed on cereal diets, A., III, 463.

See also Doniach, I.

Motz, H. See Trillat, J. J. Motz, L., and Rarita, W., photo-electric effect of 2H, A., I, 543.

See also Rosenthal, (Miss) J. E. Mou, H. C. See Kao, Cheng Heng. Moubacher, R. See Fromageot, C.

Mouchel & Partners, Ltd., R. B., Elmer, R. B., and Gerard, P. J., construction of water-cooling towers, (P.), B., 630.

Moucka, V., and Müller, R., flour types, B., 487.

Moulded Pulp Corporation, moulding of pulp articles, (P.), B., 431.

Mouldrite, Ltd., and Parkin, M. E. H., treatment of materials on heated rollers, (P.), B., 1144.

Moulds, L. de V. See Carter, A. H. Moulin, (Mlle.) A. M. See Langevin, A.

Moulthrop, L. S. See Jacques, F. O. Moulton, H. R., and Amer. Optical Co., ophthalmic lens, (P.), B., 1053.

Mounic, M. Sco Auméras, M.

Mountain Copper Co., Ltd. See Maier,

Mountford, M. See Rabinovitsch, I. M. Mouquin, H., and Garman, R. L., lowresistance glass electrodes, A., I, 428.

Moureau, P., antigen O and the specific human antigen, A., III, 294. Serological constitution of ox serum and agglutinogen O, A., III, 294.

Moureu, H., and Dodé, M., heats of formation of ethylene oxide, ethylene glycol, and of some homologues, A., I, 309. Formation of monochlorohydrins from glycols, A., II, 3. Homologues of ethylene oxido and ethaneaβ-diol; mechanism of formation of chlorohydrins, A., II, 365.

and Hamblet, C. H., ammonolysis of

tantalum pontachloride, A., I, 146. Magat, M., and Wetroff, G., Raman spectra of two molecular forms of phosphorus pontachloride, A., I, 496.

Moureu, H., and Wetroff, G., existence and stability of the phosphonitrile radicle PN: synthesis of phosphorus dichloronitride, A., I, 146. Rose's phospham, A., I, 195. Action of ammonia on phosphorus trichloride; phosphorus pernitride P₄N₆ and paranitride (PN)_n, A., I, 372. Nitrogen compounds of phosphorus, A., I, 474.

Mouriquand, G., Arloing, F., Morel, A., Josserand, A., and Armand, S., antiscorbutic power of complex salts derived from vitamin-O (sodium ferriand ferro-scorbon), A., III, 154.

Tête, H., and Wenger, G., distinction between antiscorbutic and antidystrophic activities of ascorbic acid in

experimental scurvy, A., III, 153. Tête, H., Wenger, G., and Viennois, P. effect of sterilisation and of methods of preservation on the antiscorbutic activity of lemon juice, B., 1267.

and Viennois, P., post-mortem changes in the ascorbic acid content of the adrenals, A., III, 282.

Mourot, G., compounds excreted as a result of catabolism of the amino-acids, A., III, 259. Exerction products of nitrogenous metabolism and their origin. End-products of the degradation of various amino-acids, A., III, 467.

Mousseron, M., and Granger, R., organomagnesium compounds as reducing agents, A., II, 449. Derivatives of cyclo-pentane- and -hexane-1:2-diols, A., II, 496.

Moussette, O. J., mixer, (P.), B., 993. Combined crusher, pulveriser, and screen,

(P.), B., 993.

Mousson, J. M., pitting-resistance of metals under cavitation attack, B., 1219.

Mouzon, J. C., discrimination between partial and total coincidence counts with Geiger-Müller counters, A., I, 99. See also Crane, H. R.

Movschevitsch, I. L., carbon insertions for determining temperature of deformation

under stress, B., 550.

Movsum-Zade, M. See Krasuski, K. A. Mowat, E. L. R. See Abraham, E. P. Moxon, A. L. See Franke, K. W.

Moxon, C. R., die-castings for automotive parts, B., 929.

Moyer, A. J., Wells, P. A., Stubbs, J. J., Herrick, H. T., and May, O. E., development of inoculum and composition of fermentation solution for gluconic acid production by submerged mould growths under increased air pressure, B., 1117. See also Wells, P. A.

Moyer, C. A. See Edmunds, C. W.
Moyer, H. V. See Caldwell, J. R.
Moyer, L. S., investigating electrophoresis
[of bactorial cells], A., III, 36. Changes
in classification of bactorial editions of the control of bactorial editions of the control of the control of bactorial editions. in electrokinetic potential of bacteria at various phases of the culture cycle, A., III, 274.

and Abels, J. C., electrokinetic aspects of surface chemistry. II. Electrokinetic theory in the calculation of the charge of proteins, A., I, 615.

See also Abramson, H. A.

Moyer, T. R. See Haenseler, C. M. Moyle, C. L., and Smith, L. I., polymethylbenzenes. XIX. Jacobsen reaction. V., A., II, 372.

Moynihan, R. D., technical control in a

groundwood [pulp] mill, B., 768. Mozel, I., apatite concentrate, B., 132. Mrak, E. M. See Fessler, J. H. Mrgudich, J. N., and Clark, G. L., determination of lead peroxide, A., 1, 426.

See also Clark, G. L. Mrowka, B., and Recknagel, A., theory of metals according to the Thomas-Fermi

method, A., I, 600. Mrozowski, S., structure of band spectrum of mercury vapour. II. and III., A., I, 54, 540. Absorption measurements in band spectrum of mercury vapour, A., I, 386. Absorption of mercury 5461 Λ . line in bromine vapour, A., I, 386. Structure of mercury resonance line 2537 A., A., I, 386.

Mu, J. W., Frazier, C. N., and Pillat, A., molanin pigment of the skin and conjunctiva in avitaminosis-A in man, A.,

III, 187.

Muchin, E. J. See Krakau, K. A. Muchin, K. F., thermochemistry of metal-

lurgical dolomite, and the use of Don basin dolomites for blast-furnace linings, B., 557.

Muchina, P. J., aqueous and mineral fraction of saliva during continuous secretion, A., III, 377.

Muchina, Z. S., application of mercury cathode and hydroxyquinoline to determination of aluminium in ferrous metals, B., 563.

Muchnic, H. E., and Locomotive Finished Material Co., return bend for oil stills, etc., (P.), B., 521.

Muck, E., marc content of fresh and exhausted beet cossettes, B., 172.

Muckenhirn, R. J., response of plants to boron, copper, and manganese, B.,

Sco also Alexander, L. T.

Mudd, S. See Hudson, C. L.

Mudford, H. D. See Imperial Chem. Industries.

Mudge, C. W. See Standard Oil Development Co.

Mudge, W. A., and Internat. Nickel Co., composite articles containing nickel, (P.), B., 691. Composite metals containing nickel, (P.), B., 691.

Mudra, A., cell sap concentration in cereals, A., III, 48.

Mudročič, M., photochemical sensitivity of mercuric nitrate, A., I, 38. Mücke, M., gasification of coke, semi-coke,

and brown-coal char, B., 1294.

Müffling, L. von. See Maess, L. Mühlberg, IV., pigmental colouring matter,

(P.), B., 1375. Mühlbock, O., value of glucose in human

health and sickness, A., III, 343. Mühlhausen, C. See Hock, H.

Müller, A. See Ender, W.
Müller, A. (Marburg). See Auwers, K.

von, and Reiff, F. Müller, Adolf (München). See Fischer.

Hans.

Müller, Adolf (Wien), and Schütz, A. F. [with Treer, R.], polymembered cyclic compounds. IX. cyclo Ditridecamethylenedi-imine and tridecamethyleneimine, A., II, 76.

Müller, Alex, dielectric polarisation of n-long-chain ketones near their m.p., A., I. 284

Müller, Alexander, nitrogenous derivatives of hydroxyanthraquinone glucosides. II. Theory of sugar absorption by hydroxyanthraquinones, A., II, 25. Mueller, A. C. See Drew, T. B.

Mueller, A. J. See Cox, W. M., jun.

Müller, D., mannitol dehydrogenase, A., 111, 427.

Müller, E., coal content of anthracotic lungs, A., III, 342.

Müller, Eberhard. See Baumgarten, P. Müller, Erich, theory of chromium plating, B., 798.

and Cupr, V., passivity of chromium. V., A., I, 141.

Müller, Eugen, recent advances in theoretical organic chemistry; behaviour of organic substances in the electric and magnetic field, A., I, 557.

and Sok, G., synthesis of diradicals; pp'-triphenylenediphenylmethyl,

11, 450.

and Wiesemann, W., magnetochemical investigations of organic compounds. XII. Potassium benzil and potassium phenanthraquinone, A., II, 529.

Müller, E. A. W., preferred conditions for taking X-ray photographs, A., I, 201. Hollow anode tubes for X-ray examination [of metals], B., 1229.

Müller, E. W., mutual interaction of corrosion and static tensile strains in struc-

tural steels, B., 564.

Müller, Erwin W., experiments on theory of electron emission under the influence of strong fields, A., I, 56. Field emission and cathodic disintegration of thoriated tungsten, A., I, 387. Electron-microscopic observations on field cathodes, A., I. 503.

Müller, Federico, sheets, bands, threads, etc., from rubber latex, or latices of gutta-percha, balata, synthetic rubber, etc., and articles produced by this process, (P.), B., 67.

Müller, Friedrich, significance and measurement of polarisation in the cathodic deposition of metals, A., I, 620. Potential measurements in corrosion research, B., 929.

Müller, F. A. See Kofler, L.

Müller, F. H., dipole moment of chlorobenzene and effect of solvents on it, using thirty-four different liquids, A., I, 284. Precision method for determination of the molecular polarisation of non-dissociating liquids, A., I, 347. Quasi-crystalline structure of liquids and solutions; Debye rotational hindrance, van Arkel association, and the "state of liquids, A., I, 447. Dielectric behaviour of caoutchouc, B., 66. Molecular physics of insulating material, B., 936.

Mueller, F. P., determination of corrosionresisting properties of metals and alloys against flue-gas condensate, B., 144.

Müller, F. W., comparative determination of phosphoric acid by Lorenz' method and the Herrmann and Sindlinger modification of Zinzadze's colorimetric method [in plant ash], B., 1099.

Müller, G. See under Müller & Wagner Modell & Masehinenbau.

Müller, H. See Titoff, V.

Müller, Hans, structure of liquids and solids, A., I, 16. Intensity and polarisation of the light diffracted by supersonic waves in solids, A., I, 505.

Müller, H. K., activation of rhodium, silver, and copper with neutrons, A., I, 277.

Müller, \hat{H} . O., dependence of secondary electron emission of various metals on angle of incidence of primary cathode rays, A., 209.

Müller, J., bacteriology of milk preserved

by the Hofius process, B., 79.

Müller, Jacob, and Pilat, S. von, naphthene hydrocarbons of high mol. wt., B., 206.

Mueller, J. H., cultural requirements of bacteria. VIII. Utilisation of glutamic acid by diphtheria bacillus, A., Ill, 226. Pimelic acid as a growth-accessory for diphtheria bacillus, A., III, 319. Nicotinic acid as growth accessory for diphtheria bacillus, A., III, 397. Substitution of β -alanine, nicotinic acid, and pimelic acid for meat extract in growth of diphtheria bacillus, A., III, 434.

Müller, K. L. See Schultze, G. R. Müller, K. L. (Frankfurt a.M.), and Schumacher, H. J., photochemical formation of tetrachloroethane from transdichloroethylene and chlorine, A., I, 318. Photochemical chlorination of cis-dichloroethylene to tetrachloroethane and of trichloroethylene to pentachloroethane, A., I, 370. Photochemical chlorination of ethylene compounds and influence of thereon, A., I, 627.

Müller, K. O. See Brand, K. oxygen

Müller, M. See Lettré, H.

Müller, O., processing [bleaching, dyeing, and finishing] of cuprammonium rayon [knitted] hose and fabric, B., 658.

Müller, O. A., and Stalder, F., chlorination of vegetable fibres, B., 227.

Müller, O. H., and Baumberger, J. P., oxidation-reduction potentials measured with the dropping mercury electrode.

I. Studies with quinliydrone and determination of limits of measurement. II. Polarographic investigation, A., I, 415. Müller, R. See Moucka, V.

Müller, R. Sce Votoček, E.

Müller, R. (Münster). See Durau, F. Müller, Robert, electric pickling of iron and

steel, B., 567. Electrolytic reduction of Chile saltpetre for production of ammonia, B., 1198.

Gerschbacher, Harant, mauner, and Wagner], decomposition of minerals with hot acid vapours, B.,

Müller, Rudolf, practical soldered and welded joints in monel metal, B., 572. Monel metal in the oil industry, B., 748. Müller, Ralph H., photo-electric colorimeter,

(P.), B., 802. and Teeters, W. O., sensitisation of cuprous oxide barrier-layer photoelectric cells, B., 254.

Müller, Robert H. See Gen. Electric Co. Müller. Sandor. Sec under Müller, Alexander.

Müller, Steafried. See Philipp, C.
Müller, Wilhelm. See Ruggli, P.
Müller, Willi. See Meyer, Julius.
Müller, W. J., theory of metal potential.
I. Local current theory of metal potential and its application to electro-motive behaviour of metals in oxygenfree solutions. II. Metal potential in oxygen-containing or oxidising solutions, A., I, 139. Theory of difference effect, A., I, 418. Systematisation of laws of chemical technology, B., 195. Principles of modern theory of corrosion and corrosion-passivity and their application to problem of surface protection of metals, B., 688. Theory of corrosion phenomena. Relation between the setting-up of a potential, corrosion, and corrosion-passivity of metals in aqueous solutions, B., 928.

Müller, W. J., and Briggs, J. Z., theory of passivity. XXXI. Passivity of chromium, A., I, 311.

and Graf, Ernst, detoxification of towns'

gas, B., 1001.

Graf, Ernst, Gruber, R., and Scheuch, H., examination of Austrian coals. I. Description of the coals and results of low-temperature carbonisation, B.,

and Löw, E., theory of metal potential. III. Potential establishment of various metals on solution in iodine-potassium iodide solutions, A., I, 520. Effect of purity of aluminium on corrosion in hydrochloric acid of different concentrations, B., 247.

Mueller, W. S., photoelectric Tyndall meter,

A., I, 330.

Mack, M. J., and Lindquist, H. G., factors affecting properties of whipping cream and quality of the finished product, B., 1261. and Ritchie, W. S., nutritive value of

chocolate-flavoured milk, B., 971.

Mueller Brass Co. See Levy, F. M. Müller-Lenhartz, milk and health, B., 722. Müller-Nenglück, H. H., sources of error in determination of calorific values of fuels, B., 861.

Müller-Skjold, F., injury to paintings by

X-rays, B., 810.

Müller & Wagner Modell & Maschinenbau, moulding and packing sand and similar material, (P.), B., 1360.

Münch, H., preparation of solid media using silica gel, A., III, 101.

Muench, O. B., lead-uranium ratio of

Henvey cyrtolite, A., I, 102.

Mündel, O., significance of air in steam sterilisation, B., 625. Sec also Zurukzoglu, S.

Münster, A. See Wessely, F. Mugele, R. A. See Evans, R. D.

Muggeridge, J., potato tuber moth (Phthorimea operculella, Zell.), B., 602. Muggleton, G. D. See Wells, S. D.

Muguet, P., new fields for iron castings, B., 1348.

Muhammad, S. M. M. See Ali, A. Muhlberg, S. See Ornstein, I.

Muhlert, F., desulphurisation of mineral oils and tar oils, B., 640. Behaviour of sulphur in coal during low-temperature carbonisation, coking, gasification, and combustion of the coal, B., 1000. Elimination of sulphur from industrial hydrocarbons, B., Il56.

Muhr, G. See Schmid, H. Muir, A. See Mitchell, R. L.

Muir, G. D. See Cumming, W. M. Muir, G. W. See Watson, C. J.

Muir, J., tension and notched-bar tests on an alloy steel, B., 446. Muir, W.R. See Ling, A.W.

Mukerji, B. K., and Vishnoi, S. L., biochemical study of decomposition of farmyard manure and ammonium sulphate in paddy soils of the Central Provinces [of India], B., 271.

Mukerji, S. K., hyperfine structure of the λ 4336-89, $sp^{33}D_2$ - Sp^3D_1 line in the first spark spectrum of arsenic and its nuclear

spin, A., I, 485.

Mukheriee, J., Mitra, R., Ganguli, S. C., and Chatteriee, B., reactions responsible for soil acidity. IV. Interpretation of

titration curves, B., 267.

Mukherjee, K. K. See Kar, K. C.

Mukherjee, R. See Basu, K. P.

Mukherjee, S., electrochemical properties of palmitic acid hydrosols, A., I, 303.

See also Basu, K. P.

Mukherjee, S. K., Krishnamurthy, L. S., Mahadevan, C., and Krishnamurthy, H. S., geology of the Eastern portion of the Raichur Do-ab with special reference to the granodioritic phases of the Dharwar series of rocks, A., I, 383. Mukherjee, S. N. See Chopra, R. N.

Mukherji, P. C., electronic transitions in Nd+++ ions and the absorption spectra in solution and crystals, A., I, 393. Mukherji, S. K. See Dhar, N. R.

Mulas, M., Sardinian Ephedra: E. altissima, Desf., E. vulgaris, Rich, and E. nebrodensis, Tin, B., 618.

Mulder, E. G., significance of copper for biological processes, B., 957.

Mull, J. W., determination of morphine in blood, A., III, 165.

Mullan, E. P., production of positives and negatives without the use of photography or photographic apparatus, (P.), B., 1373.

Muller, G. J. See Gerding, H., Moerman, N. F., and Smits, A.

Muller, G. L., reticulocyte responses in the pigeon produced by material effective and non-effective in pernicious anæmia: histologically different reactions of bone marrow, A., III, 255.

Muller, H., and Stein, W., depolarising primary cells and batteries, (P.), B., 583. Formation and utilisation of gaseous couples, (P.), B., 1363.

Muller, K. M., relation between soil activity and plant growth, B., 272.

Muller, P., determination of tyramine in

cerebrospinal fluid and blood serum, A.,

Mullick, D. N., and Irving, J. T., nutritional value of some Indian diets, A., III, 420.

See also Ahmad, B., Linton, R. W., and Wilson, H. E. C.

Mulliken, R. S., low electronic states of simple heteropolar diatomic molecules. I. General survey. II. Alkali-metal hydrides. III. Hydrogen and univalent metal halides, A., I, 66, 223. Nomenclature and symbols for polyatomic molecules, A., I, 164. Spectra of diatomic molecules, A., I, 164.

Mullikin, H. F., evaluation of effective radiant-heating surface and application of the Stefan-Boltzmann law to heat absorption in boiler furnaces, B., 627.

See also Wohlenberg, W.J.Mullin, C. E., $p_{\rm H}$ indicators, A., 1, 196. Mullin, G. A., metallurgical converters, (P.), B., 935.

Mullins, C. R., and Flood, C. A., gastric pepsin in various diseases, A., III, 203. Multigraph Co. See Wescott, W. B.

Mulwani, B. T., and Pollard, A. G. determination of small amounts of sodium in soil solutions, extracts, etc., B., 595.

Mumbrauer, R., investigation of adsorption of water and carbon dioxide by active oxides by Hahn's emanation method, A., I, 408.

and Fricke, R., investigation of mode of formation and structure of active a-ferric and beryllium oxides with Hahn's emanation method and Xrays, A., I, 422.

See also Fricke, R. Mumford, C. W. See Tomhave, A. E.

Mumm, O. [with Buttenschön, W., Friedriehsen, W., and Grassmann, W.], tetrahydropyridine series, A., II, 303. and Hornhardt, H., 2:3-diketopyrroline, a uninuclear substance related to

isatin, A., II, 466. Munch, J. C., Ward, Justus C., and Garlough, F. E., strychnine. VII. Toxicity of

Nux vomica preparations, B., 497.
Ward, Justus C., Mills, E. M., Buck, R. E., and Jarvis, F. N., red squill. IV. Bio-assay methods, B., 728.

See also Horn, E. E., and Scholl, F. M. Munch, R. See Barron, E. S. G.

Munch, R. H. See Gucker, F. T., jun. Muncie, W. S. See Katzenelbogen, S. Mund, W., Brenard, G., and Kaertkemeyer, L., influence of velocity of decomposition on quantitative yield of photolysis of ammonia, A., I, 470. and Rosenblum, C., formation of benzene

in the radiochemical polymerisation

of acetylene, A., II, 236. and Tiggelen, A. van, mechanism of secondary processes in the photo-chemical decomposition of ammonia, A., I, 370. Action of a-particles on hydrogen sulphide largely diluted with hydrogen, A., I, 371. Effect of pressure on the photolysis of ammonia, A., I, 471.

Munday, R. L., rotary apparatus for heating or cooling liquids or semi-liquids, (P.), B., 855.

Mundy, C. W. A., perilla oil, B., 585.

Munger, H. P., use of inhibitors in pickling

iron, B., 245.

Municipal Sanitary Service Corporation. See Raisch, W.

Munn, L., salinity in relation to soil and geology in Raichur district, A., I, 384.

Muffoz, J. M., treatment of acute mercurial poisoning with sodium formaldehydesulphoxylate, A., III, 179. See also Foglia, V. G.

Munro, H. N. See Cuthbertson, D. P. Munro, J. See Percival, E. G. V. Munro, L. A., and Alves, C. A., effect of

alcohols on the time of set of alkaline silica gels, A., I, 564.

Munroe, D. See Rhodin, B. E. F. Munsell, H. E., De Vaney, G. M., and Kennedy, M. H., toxicity of food containing selenium: effect on rats, A., III, 66. Munsell, R. I. See Brown, B. A.

Munson, E. L., and Amer. Brass Co., copper-base alloy, (P.), B., 250. See also Davis, $C.\ H.$

Munters, C. G., and Aktieb. Termisk Isolation, heat insulation, (P.), B., 630. See also Aktieb. Termisk Isolation.

Muntwyler, E., Hanzal, R. F., Mangun, G. H., and Way, C. T., electrolyte content of human autopsy tissue, A., III, 167.

See also Bowman, D. E.

Munz, E., and Bailey, C. H., refractometric methods of determining diastatic activity of flour, B., 385. Effect of enzymes of malted wheat flour on certain properties

of flour and dough, B., 1118.
Munz, L. E., and Sheldon & Co., E. H., coating composition [metal lacquer] and method of applying, (P.), B., 264.

Murahashi, S., derivatives of o-xylene, A., II, 17. Differentiation of monohydric primary, secondary, and tertiary alcohols; micro-determination of velocity of esterification, A., II, 43. Odorous constituents of *Matsutake*. I., A., III, 107.

Murakami, R., influence of monochromatic light on action of soya-urease. I. and II., A., III, 97, 354. Influence of monochromatic light on action of yeast catalase. I. and II., A., III, 353.

Murakami, S., asparagose, A., II, 446. Action of "βγ-hexenol," a constituent of raw leaves of Thea sinensis japonica; comparison with hexyl alcohol. I. General toxic manifestation: action on cold- and warm-blooded animals. II. Action on the vessels, skeletel muscles, and motor nerve endings, A., III, 215, 264.

Murakami, T., properties of stainless steels, B., 919.

and Kishimoto, H., change of transformation points of chromium steels due to cooling conditions, B., 447.

and Shibata, N., equilibrium diagram of the copper-antimony system. I. Thermal analysis and microscopical examination, A., I, 176. Muralo Co., Inc. See Iddings, C.

Muraour, H., spectrographic study of detonation of priming explosives in a vacuum, A., I, 314. Attack of nitric esters by diphenylamine in presence of catalysts, B., 732. Entrainment by water vapour as a possible cause of loss of nitroglycerin from SD powders, B., 1279.

and Langevin, A., luminosity phenomena produced by the detonation in air and in a vacuum of certain priming

explosives, A., I, 314.

Langevin, A., and Aunis, G., measurement of explosive pressures; comparison of crushers and piezo-electric quartz [as pressure gauges]. II., B., 623.

Michel-Lévy, A., and Burlot, E., propagation of explosion waves in

different gases, A., I, 568. and Schumacher, W., velocity of combustion of colloidal powders under

atmospheric pressure, B., 1278. See also Audubert, R., and Michel-

Lévy, A.

Murata, F. See Shibata, F. L. E.

Murata, Kazuya, and Kamidoi, M., azo-dyes. I. Azo-dyes derived from 2:2'dinitrobenzidine, B., 1316.

Murata, Kiichi. See Sato, Masayoshi. Murata, K. J., p_H and the formation of copper complexes, A., I, 241.

Murata, Sadumu, quantitative changes in enzymes in the liver and in various tissues due to impaired renal functions, A., III, 139.

Murata, Sunao. See Uchida, S. Murati, K. See Nakaidzumi, M.

Muravlev, L. N., investigation of acidproof natural rocks, ceramic ware, and masses for chemical apparatus, B.,

Murayama, M. See Kondo, K. Murch, W. M. See Dow Chem. Co., and Nat. Aniline & Chem. Co.

Murdick, P. P., and Cohen, S. M., concentration and purification of antimeningococcus serum, A., III, 6.

Murdoch, D. G. See Adam, W. G.

Murdoch, J., adamite from Chloride Cliff, California, A., I, 204. Murdock, F. M., and Fiberloid Corp., phenolic resins, (P.), B., 470.

Murdock, H. R., and Champion Fibre Co., recovery of chemicals from waste [wood-] pulping liquors, (P.), B., 334.

Mnrer, H. K., determination of calcium in blood serum, A., III, 85.

See also Knott, J. C.Murgatroyd, F. See Lowrie, E. M.Murgatroyd, J. B., thermal-endurance tests for glassware, B., 137.

Murgulescu, I. G. See Candea, C.

Murke, H. See Abderhalden, E. Murlin, J. R., Burton, A. C., and Barrows, W. M., jun., specific dynamic action of butter-fat and of superimposed sugar, A., III, 381.

Nassett, E. S., Murlin, W. R., and Manly, R. S., rate of ketogenesis in human subjects on high-fat diets, as influenced by different sugars, A., III, 381.

See also Clark, D. E., and Kochakian,

Murlin, W. R., and Manly, R. S., comparative effects of glucose, sucrose, and fructose on ketone production in phloridzinised dogs, A., III, 385. See also Murlin, J. R.

Murmann, E., and Prell, C., artificial

skating rink, (P.), B., 1346.
Murmann, H., spectral variation of anomalous optical constants of thin silver, A., I. 18.

Murneck, A. E., internal mechanism of photoperiodism, A., III, 409. See also Long, J. H.

Muromtzev, B. A., solubility study of the system ammonia-phosphoric acid-water at 50°, A., I, 617.

Murontzeva, V. See Rabinovitsch, A. Murooka, T., and Hagisawa, H., hyposulphite. V. Reduction by zinc amalgam of sodium sulphite and zinc sulphite under the action of carbon dioxide, A., I, 576.

Murphy, A. J. See Stone & Co., Ltd., J. Murphy, D. F., toxicity of thiocyanates, B., 397.

Murphy, E. A. See Internat. Latex Processes.

Murphy, G. B. See Watson, K. M. Murphy, G. M., temperature variation of some thermodynamic quantities, A., I, 505.

and Brandt, P. F., chemical at. wts. and relative abundance of oxygen isotopes, A., I, 274.

and Vance, J. E., Raman spectra of gaseous, liquid, and solid hydrogen sulphide, A., I, 496.

See also Blagg, J. C. L., and Rosenthal, (Miss) J. E.

Murphy, H. F., effect of fertilisation on replaceable bases in soil, B., 376. Influence of fertiliser on quality of wheat, B., 1386.

Murphy, J. A., jun., recovery of metal values [copper], (P.), B., 800.
Murphy, J. J. See Linde Air Products Co.

Murphy, O. J., pentothal-sodium anasthesia, A., III, 136.

Murphy, P. A., nature and control of

potato virus diseases, A., III, 81. See also Parkes, J. W.

Murphy, R. K. See Dwyer, F. P.

Murphy, R. R., Hunter, J. E., and Knandel, H. C., effect of vitamin-D intake of the hen on bone calcification in the chick, A., III, 234.

Murray, A. G. See Imperial Chem. Industries.

A. R., composite rubber sheet, Murray, (P.), B., 1379.

Murray, (Miss) A. R., and Taylor, T. W. J., aa'-dicyclohexylsuccinic acids, A., II, 419. Murray, C. W. See Fletcher & Co., G., and Haller, M.H.

Murray, H. D., theory of photographic development, B., 844.

and Spencer, D. A., addition of silver ion reactants to organic [photographic] developing solutions, B., 982.

Murray, J. A., paraffin sections of formolfixed insect material, A., III, 334.

Murray, J. D., and Murray Liquafilm Corp., coating [for printed paper, etc.], (P.), B., 701.

Murray, J. V., heat-treatments of whiteheart malleable cast iron, B., 917.

Murray, L. W., Seabury, R. L., and Gen. Motors Corp., mixing [phenol-aldehyde] resins with other material, (P.), B., 1241.

Murray, M.J. See Cleveland, F.F.Murray, M.M., maternal transference of fluorine, A., III, 131.

and Bowes, J. H., composition of enamel, dentine, and root in caries and pyorrhœa, A., III, 299.

See also Lowater, F.

Murray, R. B. See Boyd, E. M. Murray, R. T. K., recording field current

electrons with a Geiger-Müller counter, A., I, 480.

Murray, S. See Deuel, H. J., jun. Murray, T. F., jun. See Eastman Kodak Co.

Murray, W. See Colbeck, E. W.
Murray, W. Si, indium-containing glass,

(P.), B., 783.

Murray Liquafilm Corporation. See Murray, J. D.

Murri, I. K., determination of vitamin-A, A., III, 324.

Murrill, W. A. See Newburgh, L. H. Murty, G. V. L. N., and Gopalarao, G., colorimetric determination of nitrates, A., I, 261.

Murty, N. N., Weinberger, H. [with Gardner, W. II.], use of the quinhydrone and antimony electrodes for potentiometric titrations of resin solution, B., 588.

Murza-Murzicz, S. See Pelczar, K. Murzaiev, P. M., scricitisation of pegmatites in the Gdov district, Leningrad, A., I, 155. Genesis of some sulphur deposits of the U.S.S.R., A., I, 334

Musaev, I. A. See Juriev, J. K., and Zelinski, N. D.

Musajo, L., xanthurenic acid. I.-III. Xanthurenic acid, kynurenic acid, and kynurenine. V. Preparation of kynurenic acid and of other 4-hydroxyquinoline derivatives. VI. Synthesis of xanthurenic acid. VII. Chromatographic isolation of urinary indirubin, A., II, 305, 388; III, 383. Benzylidenepyruvic acids. III., A., II, 418. Chromatographic isolation of indirubin from urine of animals on protein-rich diets, A., III, 170.

and Amoruso, V., benzoylthiobenzamides,

and Chiancone, F. M., xanthurenic acid. IV. Formation in vivo of xanthurenic acid from tryptophan, A., III, 383.

Musante, A. F. S., Perrine, J. H., and Sun Oil Co., apparatus for determining [gasliquid] critical temperatures, (P.), B., 636. Musante, C., and Fusco, R., alkyl hypochlorites; action on Schiff's bases.

II., A., II, 12. See also Fusco, R.

Musbach, F. L., and Sell, O. E., effect of fertiliser on quality and chemical composition of canning peas, B., 480.

Muschenheim, C. See Hardy, J. D. Musgrave, G. W., and Free, G. R., factors which modify rate and total amount of infiltration in field soils, B., 163.

and Norton, R. A., soil and water conservation investigations at the Soil Conservation Experiment Station, Missouri Valley, Loess Region, Clarida, Iowa, 1931—5, B., 1249.

Musher, S., preservation of animal tissues, (P.), B., 186.

and Musher Foundation, Inc., prevention of oxidation [of foodstuffs], (P.), B., 85. Oil with grain material to stabilise against oxidation, (P.), B., 1369.

See also Peters, F. N., jun. Musher Foundation, Inc. See Musher, S. Mushkat, C. M. See Henderson, G. H. Musil, A., theory of binary liquid mixtures,

A., I, 516.

See also Kratky, O. Musitano Guerrera, E. See under Guerrera,

Musjakov, V. A. See Talmud, I. L.

Muskat, I. E. See Du Pont de Nemours & Co., E. I.

Muskat, M., flow of fluids through porous media, B., 989.

and Meres, M. W., flow of heterogeneous fluids through porous media, B., 854. and Wyckoff, R. D., theory of acid treat-

ment of oil wells producing from limestone reservoirs, B., 203.

Musker, H., insulation of surfaces against heat and cold, (P.), B., 856. Muskett, A. E. See Cairns, H.

Mussehl, F. E. See Ackerson, C. W., and Sampson, F. R. Musser, R. See Krantz, J. C., jun.

Mussgnug, G., degree of burning and quality

of [Portland cement] clinker, B., 914.

Mustafa, A., relation between peptone
utilised and indole produced by
bacteria, A., III, 146. Yield of indole from indole-producing bacteria and composition of peptone medium, A., III, 146. Rôle of some growth factors in production of diphtheria toxin, A., 111, 319.

See also Ramon, G.

Mustafin, L. S. See Orlov, N. A. Musulin, R. R., and King, C. G., metaphosphoric acid in extraction and titration of vitamin-C, A., III, 46.

Mutch, N., medicinal kaolin in food poisoning, B., 724.
Mutermilch, S. See Grimberg, A.
Muthuswami, N. See Rao, S. R.

Muto, T., quantum theory of electrical conductivity of alloys in the superlattice state. II., A., I, 297. Quantum theory of phosphorescence of crystal phosphors. II., A., I, 395.

Mutscheller, F., presence of heavy metals, especially copper, in organs of females of Bonellia viridis, extracts of which favour the development of males from indifferent

larvæ, A., III, 133.

Mutschin, A., and Pollak, R., direct titration of sulphate with barium chloride using sodium rhodizonate as external indicator. II., A., I, 44. Indirect titration of sulphate with barium chloride using sodium rhodizonate (or sodium tetrahydroxybenzoquinone) as indicator

in solution. I. and II., A., I, 148, 324.
Mutzenbecher, P. von. See Ludwig, Willy.
Myddleton, W. W., synthetic motor spirit,

B., 751.

Myers, A. See Hall & Kay, Ltd.

Myers, C. E. See Ward, A. R.

Myers, C. N. See Thorne, B. Myers, C. S. See Mason, H. L.

Myers, E. G., and Myers-Sherman Co., means for mixing, (P.), B., 4.

Myers, H., and Metzger, W. H., influence of superphosphate and light lime applications alone and in combination on composition of sweet clover, B., 1252.

Myers, J. T. See LeMar, J. D. Myers, P. B. See Nikitin, A. A. Myers, R. H. See Banfield, T. A.

Myers, R. J., and Blumberg, H., emulsification of fat for intravenous administration, A., III, 108.

and Harkins, W. D., multimolecular films: mixed films with two or more components. I. Fatty acids and non-polar substances, A., I, 76. Effects of traces of metallic ions on films at interfaces and on the surface of water, A., I, 300. Viscosity (or fluidity) of liquid or plastic unimolecular films, A., I, 454. See also Fowkes, F. M., and Harkins, $W.\ D.$

Myers, R. P. See Sharp, P. F. Myers, V. C. See Andes, J. E., Deich-mann-Grübler, W., Einsel, I. H., and Mangun, G. H.

Myers-Sherman Co. See Myers, E. G.
Myhren, A. J. See Stutz, G. F. A.
Mylius, C. R. W. See Pehrman, G.
Mylks, G., jun. See Boyd, E. M.
Myrbäck, K., mol. wt. of limit-dextrin, A.,
II, 277. Soluble dextrins and the constitution of starch, A., II, 400. Amylase content of pure line barley, A., III, 142. Yeast and trehalose, A., III, 143.

and Ahlborg, K., dextrins and constitution of starch; phosphorus content of starch and dextrins, A., II, 446.

and Örtenblad, B., trehalose and yeast. I.—III., A., III, 70, 314, 431. β -Amylase from ungerminated barley, A., III, 482.

Örtenblad, B., and Ahlborg, K., fermentation of dextrins, starch, and disac-

charides, A., III, 431. Mystkowski, E. M., ultracentrifugal studies of compounds of proteins with polysaccharides; compounds between proteins and glycogen, A., Ill, 252.

N.

Naamlooze Vennootschap Chemische Fabriek "Gembo," crystalline substances [e.g., sodium silicate], (P.), B., 779.

N. V. Chemische Fabriek L. van der Grinton, copying on positive diazo-type layers, (P.), B., 732.

N. V. Domaniale Mijn Maatschappij, separation of solid materials having different sp. gr. by means of a suspension, (P.), В., 993.

N. V. Industrieele Maatschappij voorheen Noury & van der Lande, titanium dioxide and products containing it, (P.), B., 909.

V. Internationale Alfol-Maatschappij, thermal insulation applicable also for use in heat radiation, (P.), B., 1287. and Liehr, IV., composite foils, (P.), B., 430.

N. V. Internationale Sniker en Alcohol Comp. Internat. Sugar & Alcohol Co. "Isaco," obtaining alcohol free from nitrogen bases, B., 279. See also Färber, E.

N. V. Maatschappij tot Beheer en Exploitatie van Octrooien. See Rosengarth, F.

N. V. Maatschappij tot Exploitatie van " ten Bosch Octrooien N.V.," [fuel] briquettes, (P.), B., 18. Mats or layers from glass fibres and other inorganic fibrous material, (P.), B., 1342.

N. V. Machinefabriek "Jaffa" v./h. L. Smulders & Co., separation of particles of greater density from a gaseous or vaporous fluid, (P.), B., 1290.

N. V. Machinefabriek Reineveld, centrifuges, (P.), B., 304.

N.V. Machinerieen- en Apparaten-Fabrieken "Meai," separation of hydrocarbon mixtures, (P.), B., 412.

N. V. Molybdenum Co., welding electrodes and electric make-and-break switch contacts [of cadmium-copper alloy], (P.), B., 253. Welding electrodes and electric make-and-break switch contacts, (P.), B., 1226. See also Bass, H.

V. Nederlandsch Laboratorium de Spaarnestad, process and light-sensitive layer for producing pictures with the aid of screens, (P.), B., 293. Development process and developer for producing hardened images upon exposed silver halide-colloid emulsions, (P.), B., 295. Application of silver halide colloid layers without distortion of future printing forms, (P.), B., 500.

N. V. Nederlandsche Research Centrale, conversion of oils, fats, and fatty acids into elaidic acid or derivatives thereof,

(P.), B., 465.

N. V. Nieuwe Octrooi Mattschappij, and Sachs, A. P., cracking of hydrocarbon compounds, (P.), B., 15.

N. V. Octrooien Maatschappij Activit, puri-

fication of liquids, (P.), B., 305.

N. V. Philips' Gloeilampenfabrieken, cathoderay tubes, (P.), B., 56. Electric-discharge tubes, (P.), B., 149. Electrodes having photo-electric emission properties, (P.), B., 254. Photo-electric electrodes, (P.), B., 254. Applying fluorescent material to a support, (P.), B., 255. Fluorescent screens, (P.), B., 255. Fluorescent layers, (P.), B., 262. Valves for layers, (P.), B., 262. Valves for vessels containing gas under pressure, (P.), B., 308. Increasing tenacity of metal articles [copper anodes for Xray tubes], (P.), B., 357. Electric incandescence lamps, (P.), B., 362. [Electrodes for] cathode-ray tubes, (P.), B., 363. Manufacture of (P.), B., 363. electrodes for electric condensers [by extrusion], (P.), B., 363. Electric-discharge tubes having a cadmium vapour filling, (P.), B., 461. X-Ray apparatus for crystal analysis, (P.), B., 583. Preparations possessing antirachitic properties, (P.), B., 621. Rendering glass resistant to metal vapours, (P.), B., 672. Electric contacts, (P.), B., 693. Electric-discharge tubes formed of quartz, (P.), B., 1076. [Closing the ends of] electrolytic condensers, (P.), B., 1076. Gas-filled electric-discharge tubes, (P.), B., 1231. [Moulded plates of] electrical insulating materials, (P.), B., 1231. Carboncoated electrodes, etc., in electric-discharge tubes, (P.), B., 1364. Electric-discharge tubes with mercury cathodes, (P.), B., 1364. [Multi-unit] electrolytic condensers, (P.), B., 1364. and Dippel, C.J., [gelatin for] mechanical recording, (P.), B., 162.

V. Philips' Gloeilampenfabrieken, Emmens, H., Geel, W. C. van, and Claasen, A. F. P. J., electrolytic condenser, (P.), B., 803.

Reerink, E. H., and De Boer, J. H., electrode system having unsymmetrical conductivity, (P.), B., 1231.

Nabar, G. M., Scholefield, F., and Turner, H. A., hypochlorite oxidation of cellulose in presence of a reduced vat dye, B., 231.

Nachlas, A., Duff, G. L., Tidwell, A. C., and Holt, L. E., jun., liver function as tested by lipemic curve after intravenous fat administration, A., III, 384.

Nachmansohn, D., effect of sympathomimetic and parasympathomimetic substances on chemical processes producing energy of muscular contraction. III. Effect of adrenaline on minced muscle, A., III, 265. Choline-esterase in the central nervous system, A., Ill, 429.

See also Bacq, Z. M., and Marnay, A. Nachtsheim, H., and Hoekstra, J., determination of quantity of tin on tinned copper

wire, B., 1064.

Nadai, A., plastic behaviour of metals in the strain-hardening range. I., B., 568. Nadai, G., rapid determination of the eggcontent of [wheaten] macaroni, etc., B., 179.

Nadeau, A. See Bois, E. Nadeau, G. F. See Eastman Kodak Co. Nadelin, E. P., differential staining of live and dead bacteria in milk, B., 1399.

Nadj, M. M. See Kotscheschkov, K. A. Nadjakov, G., nature and origin of large ions in the atmosphere, A., I, 338. New kind of permanent polarisation of dielectrics, A., I, 444. External and internal photo-electric effects of nonconductors, A., I, 498. Photovoltaic effect with a highly insulating substance, A., I, 498. Theory of the latent image, A., I, 526.

Nänni, J., depositing chamber for electric gas purification, (P.), B., 695.

Närvänen, R. See Simola, P. E.

Näsänen, R., oxidation of graphite in the glow discharge, A., I, 626. Naffziger, H. C. See Aird, R. B.

Naftali, M., mobility of halogens in αβ-dichlorocarbonyl derivatives, A., II,

368. See also Lichtenberger, J.

Naftalis, I. See Slatineanu, A.

Naftel, J. A., liming investigations. I. Calcium carbonate equilibrium method of liming soils for fertility investigations. II. Influence of lime on the sorption and distribution of phosphorus in aqueous and soil-colloidal suspensions, B., 163, 164.

Nag, N. C., chemical examination of the Indian medicinal plant Trichosanthes

diocca, A., III, 330.

and Banerjee, H. N., seeds of varieties of Meconopsis as a source of oil and manure, B., 941.

Nagahisa, M. See Yamagata, S.

Nagai, M., and Locher, G. L., production of mutations by neutrons, A., III, 348. Nagai, S., hydrothermal reaction of

alkaline solutions on kaolin. I., B., 548. Hydraulic refractory cements. I., B., 1208.

and Katayama, J., refractor y cements and mortars. I., B., 348. Extraction of alumina from high-aluminous raw materials, B., 1335.

and Nakagawa, T., addition of bentonite to Portland cement. I., B., 674. See also Inoue, K.; and Tomon ari, T.

Nagai, W. See Soda, T. Nagai, Y. See Maki, T.

Nagano, M. See Sobue, H.

Nagaoka, Hantaro, spectrograph with strong illumination, A., I, 99.

Nagaoka, Hiroshi, restoration of circulatory blood after hæmorrhage. I. Changes in hæmoglobin content of blood and in colloid-osmotic pressure of plasma of rabbits after bleeding. II. Restoration of colloid-osmotic pressure of plasma after bleeding. III. Changes in blood volume and colloid-osmotic pressure of plasma following replacement by various solutions of blood withdrawn, A., III, 85.

Nagaoka, N., and Mishima, T., Paschen

series of hydrogen and deuterium, A.,

I, 385. Nagasawa, K. See Watanabe, Saburo. Nagata, S., preparation of crude straw cellulose. I. General composition of

rice straw, B., 892.

Nagata, T. See Shinkai, S.

Nagatkin, I. G., improved mercury toluene thermoregulator, A., I, 478.

Nagatu, S. See Yoshida, U. Nagel, C. F. See Jeffries, Z. Nagel, K. See Lange, E.

Nagel, R., efficiency of centrifugal dust extractors, B., 2.

Nagel, W. See Scheffer, F.

Nagel, Werner, and Baumann, E., shellac. X. Lesser-known properties, B., 943.

Nagelschmidt, G., calcium silicophosphate, A., I, 372.

Nagiev, N. M. See Rubinstein, A. M. Nagler, K. B., activities of Water Gas Committee [American Gas Association], B., 746.

Nagornaja, N. A. See Markov, V. K.

Nagorski, D. See Tschishevski, N. Nagorski, M. V. See Larin, P. S.

Nagrodski, I. See Komarov, F. Nagy, J., and Steiner, R., metallurgical treatment of iron ores, etc., (P.), B.,

Nagy, L. von. See Bodnár, J.

1359.

Nagy, Z. von S. See Kocsis, E. A.

Naherniac, A., near infra-red spectra of organie substances in liquid and vapour states, A., I. 281. See also Barchewitz, P.

Nahm, L. J., and McKenzie, F. F., cells of adrenal cortex of the ewe during estrual cycle and pregnancy, A., III, 301.

See also McKenzie, F. F.

Nahmias, M. E., distribution of the lifetimes of radioelements, A., I, 592. Transmutations with possible emission of negative protons, A., I, 594.

and Walen, R.J., artificial radioactivity, A., I, 340. See also Walen, R.J.

Náhunek, A., influence of filtration on viscosity of beet-factory products, B., 379. Naidina, O. G. See Bobko, E. V.

Naigai Kagaku Seihin Kabushiki Kaisha, composition for preventing incrustation in boilers, (P.), B., 630.

Naiman, B., preservation of starch indicator, A., I, 333. Reagent for vitamin-B₁, A., III, 232.

Nair, K. R. See Damodaran, M. Naish, A. E. See Timperley, W. A.

Naito, M. See Narasaka, S.

Najib-Farah, defensive rôle of bilirubinæmia in pneumococcal infection, A., III, 206.

Naka, A. See Kameyama, N.

Naka, S., Okumura, N., and Kakihara, G., summer encephalitis in Japan, A., III,

Naka, T. See Matsui, M.

Nakabayasi, K., nuclear forces, A., I, 391. Nakagawa, T. See Nagai, S. Nakaguchi, S. See Ueno, Sei-ichi.

Nakahama, T., and Nishimura, S., cocoon thread from silkworms reared under dry and wet conditions, B., 890. Retting of vegetable [ramie] fibre materials. I. Selection of effective micro-organisms for bacterial retting. II. Action of Ram. F. on retting. III. Result of retting with Ram. F., B., 1318.

Nakahara, W., Inukai, F., and Ugami, S., factor L₂, a second dietary factor for lactation. A. III. 105. Dieter.

lactation, A., III, 105. Dietary requirements for lactation. VI. Further experiments on factor L_2 , a second lactation factor present in yeast, A., III. 156.

See also Tokuyama, S.

Nakaidzumi, M., Murati, K., and Yama-mura, Y., biological effects of rays produced by a cyclotron, A., III, 423.

Nakajima, K., and Sakurada, S., glue and glueing. IV.—VI., B., 375.

Nakamiya, Z., hydrogenation of vitamin-A fraction of the liver oil of Stereolepis ischinagi (Hilgendorf). II., A., III, 324. Correlation between the international and the cod-liver oil unit of vitamin-A, A., III, 493.

Nakamura, A. See Tsuchida, R. Nakamura, H., metabolism of purple bacteria. I. Photo-synthesis in sulphurfree, purple bacterium, Rhodobacillus palustris. II. Carbon dioxide assimilation of R. giganteum. III. Presence of a hydrogenlyase in Rhodobacillus palustris and its rôle in the mechanism of bacterial photosynthesis, A., III, 356, 487. Nakamura, K., effect of temperature on

Young's modulus of elasticity in nickel-

copper alloys, B., 569.

Nakamura, Mitsuo, peroxides of fatty oils. I. Determination of active oxygen. II. Effects of anti-oxygens, pro-oxygens, and solid powders on formation of peroxides of soya-bean oil. III. Rates of formation of peroxides of soyabean oil and formation of volatile per-oxides in blowing of soya-bean oil. IV. Effects of anti-oxygens, pro-oxygens, and solid powders on the decomposition temperature of soya-bean oil peroxides, and mechanism of driers in formation and decomposition of peroxides. V. Decomposition reaction of soya-bean oil peroxides at 130° and influence of antioxygens, pro-oxygens, and solid powders thereon. VI. Formation and decomposition of peroxides of fatty oils, B., 1080, 1366. Anti-oxygens of fatty oils. XV. Action of carotene on oxidation of fatty oils. XVI. Ultra-violet rays as a cause of inversion of oxidation-catalysts for fatty oils, B., 1081.

Nakamura, Morizumi. See Uhara, I. Nakamura, S. See Ueda, Y.

Nakamura, Seiji, and Kanazawa, H., effect of light on pigments and dyes, A., III, 447.

See also Go, Y.

Nakamura, T. See Kanamaru, K.
Nakamura, Y., physiology of digestion. I.
Effect of calcium salts on the digestion of fats, A., III, 305. See also Keimatsu. S.

Nakano, M. See Nakazawa, R. Nakano, T., reaction of embryonic chick heart to quinidine, cinchonine, cinchonidine, optoquin, eucupine, vuzine, sinomenine, parasinomenine, dihydrosino-menine, and deoxy-4H-sinomenine, A., III, 27.

Nakaoki, T., glucosides of the flavone series. III. Constituents of Trifolium repens, L. IV. Constituents of Cosmos

bipinnatus, Cav., A., II, 7, 179. Nakaschidse, L. R. See Gogoberidse, D. B.

Nakasone, T., and Midorikawa, Y., chemical constituents of food plants for true and wild silkworms, Bombyx mori, Antheraea yamamai, and A. pernyi, A., III, 81.

Nakatsuka, Y., cobaltiammines which coordinate with quaternary ammonium bases, A., I, 42.

Nakayama, A. See Hayashi, M. Nakayama, Y. See Saegusa, Hachiro.

Nakazawa, K. See Akai, S.

Nakazawa, R., and Shimo, M., fermentation micro-organisms in awamori preparation. II. Saccharomyces, B., $\bar{2}78.$

Shimo, M., and Watanabe, H., fermentative micro-organisms in awamori preparation. I. Aspergillus species, B., 77.

Takeda, Yoshito, and Nakano, M., citric acid fermentation. I., A., III,

Nakazawa, Yoshio. See Kaneko, Hideo. Nakazawa, Yoshiro, effect of various iron compounds on growth and histological picture of cultures of fibroblast. I. and II., A., III, 22. Influence of metallic compounds on growth and histological picture of fibroblast cultivated in vitro, A., III, 215. Bactericidal action of the intestinal fluid of the silkworm, Bombyx mori, L., A., III, 319.

Nakhmanovitsch, M. I., and Berman, S. L., araban and pectie acid in [beet-]sugar manufacture, B., 483.

Nakhutin, I. See Schubnikov, L. V. Naklonov, V. A., automatic determination of water content of solid fuels and gases, B., 998.

Nalbandjan, A. See Biron, A. Naldi, G. F. See Berlingozzi, S.

Name Corporation, [machine for] manufacture of sausages and similar food products, (P.), B., 85.

Namekawa, T., and Takahashi, T., rate of evaporation of small water drops, A., I. 607.

Nametkin, S. S., and Abakumovskaja, L. N., hydropolymerisation, a new type of polymerisation of ethylenic hydrocarbons under influence of sul-

phuric acid, A., II, 1.

Abakumovskaja, L. N., and Rudenko,
M. G., hydro- and dehydro-polymerisation of ethylenic hydrocarbons, A.,

II, 315.

and Nifontova, S. S., hydrocarbons of paraffin and ceresine, B., 107.

and Pokrovskaja, E. S., products of condensation of benzene with cyclohexene in presence of aluminium chloride, A., II, 330.

and Rudenko, M. G., transformations of unsaturated hydrocarbons under the influence of aluminium chloride, A., II, 315.

Nametkin, S. S., and Schavrigin, A. I., reversal of optical rotation in camphene

rearrangement, A., II, 201. and Serebrianikova, A. G., chlorination of pentane from petroleum, B., 116.

and Stukov, A. P., homologues of the XI. 4-Methyl-3camphor group. hydroxymethylenecamphor and its tautomerides, A., II, 108.

and Zabrodina, A. S., homologues of the camphor group. XII. Secondary 4-methyl-a-nitrocamphene and 4methyl-a-camphenone, A., II, 108.

Namias, L. See Urion, E. Namias, R., fine-grain [photo-]chemical

development, B., 844.
Namikawa, H. See Hayashi, M.
Namikawa, T., and Kunisue, H., complete gasification of coal. XII., B., 1294.

Nanai, K. See Aoyama, Shinjiro. Nance, G. R., and Dresser, H. A., operation of atmospheric water-cooling towers, B.,

Nance, J. T. See Guthrie, F. C.

Nanfeldt, W., and World Bestos Corp. mouldable composition [from rubber and asbestos], (P.), B., 468. Nanji, H. R. See Edwards, F. W.

Naphtali, H. refining and recovery of light motor fuels by a low-temperature process, B., 868.

Naphtali, M., utilisation of hydrogen sulphide from [oil-]refinery gases as a source of sulphuric acid, B., 1156.

Napier, L. E., and Das Gupta, C. R.,

hæmatological studies in Indians. IV. Fractional gastric analyses in normal Indians, A., III, 298.

Napoli, I., colorimetric determination of phosphoric anhydride in foodstuffs by means of the photo-electric colorimeter, B., 1260.

Naps, M. See French, H. S.

Narain, R., and Singh, A., bismuthate method for determining manganese in plant material, A., III, 81. See also Lander, P. E.

Narang, K. S. See Bhatnagar, H. C.

Narasaka, S., biochemistry of copper. XIII. Changes in blood-copper during experimental hæmolytic anæmia. XIV. Accumulation of copper in the mongolian spot, A., III, 213.

and Naito, M., lipin content of caseous tubercles, A., III, 207.

Narasimhamurthi, M. L. See Ghosh, J. C.

Narasimhamurthy, G., chemical nature of

vitamin-B₁, A., III, 495.

Narasimhan, M. J., report of mycological section, 1933—34, B., 602.

Náray-Szabó, S. von, X-ray examination of aluminium boride, AlB₁₂, A., I, 16. Overvoltage of hydrogen at mercury, A., 1, 140. Adsorption and overvoltage, A., I, 311.

Narayan, A. L. See Royds, T.
Narayan, K. See Singh, B. K.
Nargund, K. S. See Dalal, G. A., Dave, K. P., and Phalnikar, N. L.

Narkiewicz-Jodko, K. See Ziemecki, S. Narkuziev, T. See Norkina, S. S Narskich, O. G. See Saitschuk, V. I.

Nash, A. W., fuel supplies of Great Britain, B., 858. Uses, production, and consumption of fuel oils in Great Britain, B., 1298. See also Ba Thi, M., Imperial Chem. Industries, and Strang, L. C.

Nash, J. T. See Mallory, L. E.

Nasini, A. G., Rossi, C., and Balian, A., stability of [bituminous] emulsions in presence of metals, B., 314.

Nasini, A. G., Rossi, C., and Delia Santa, P., interfacial tensions of mixtures of organic liquids in presence of emulsifiers, A., I, $2\bar{34}$.

Nasirova, K. M. See Kogan, A. M. Nason, H. K. See Carswell, T. S. Nassett, E. S. See Murlin, J. R.

Nasu, N_{-} , equilibrium $TiO_2-H_2-Ti_2O_3-H_2O$, A., I, 31. Reduction equilibria titanium dioxide by hydrogen, A., I, 185. Thermochemical data for titanium oxides, A., I, 244.

Natanson, N. E. See Krestinskaja, V. N. Natanson, S., position of maximum optical sensitivity of sensitised photographic plates, B., 1136, 1137.

Natelson, S., and Gottfried, S. P., synthesis of β -1-phenanthrylpropionic acid, A., II, 101.

and Pearl, A., synthesis of benzylidene-phthalan, A., II, 111.

Nath, B. See Guha, P. C.

Nath, B. V., report of Imperial Agricultural Chemist, B., 377.

Nath, M. C., constitution of artostenone, a ketonic sterol from Artocarpus integrifolia, A., II, 294. Artostenone, a ketonic sterol from Artocarpus integrifolia. IV. Oxidation of artostenone. V. Platinichloride of artostenamine; determination of carbon and hydrogen in stenones. VI. Constitution of artostenone, A., II, 459.

See also Basu, K. P.

Nath, N. S. N., β -decay as due to a neutrino shower, A., I, 543.

See also Born, M., and Parthasarathy,

Nathansohn, A., lowering the solidification point of bituminous hydrocarbon oils, P.), B., 1012.

Nathanson, J. B., optical constants of liquid gallium, A., I, 605.

National Adhesives Corporation. See Fuller, A. D.

Nat. Aniline & Chemical Co., Inc., and Bissell, D. W., development of [azodyes and vat] dyes, (P.), B., 899.

and Conrad, K. F., removal of impurities [which stain acetate silk] from dyes which do not dye acetate silk], (P.), B., 1026.

and Coward, H. W., separation of dinitrobenzene isomerides, (P.), B., 527.

and Flett, L. H., purification of dyes, (P.), B., 1026.

and Fleysher, M. H., nitration of dibenzanthrone compounds, (P.), B., 1029.

Fleysher, M. H., and Ogilvie, J., vat dye pastes, (P.), B., 330. Purification of pyranthrone, (P.), B., 1029. and Hess, R. W., [black] sulphur dyes,

(P.), B., 1318.

and Kern, J. G., [nitrosoamine] dye compositions, (P.), B., 899.

and Kiernan, H. G., amine salts of dyes containing one or more acid groups

[pigments], (P.), B., 1026. and Kimmel, S. C., treatment of spiritsoluble nitrosines, (P.), B., 1031.

and Kranz, F. H., diarylamines, (P.), B., 419. Arylnaphthylamines, (P.), B., 1023.

and Kyrides, L. P., intermediates for secondary alkylated rhodamine dyes [alkyl-m-aminophenols], (P.), B., 119. and Masterman, T. L., halogenated

indigos, (P.), B., 422. and Moorhouse, W. R., printing pastes, (P.), B., 1041.

Aniline & Chemical Co., Inc. Mnrch, W. M., and Higgins, F. M., [vat] dye powder compositions, (P.), B., 1184.

and Ogilvie, J., halogenated indanthrenes,

(P.), B., 122.

and Perkins, R. L., 5-halogeno-2-aminotoluenes[-o-toluidines], (P.), B., 216. Aminoalkoxybenzamides, (P.), B., 651. [Flotation reagent for] ore concentration, (P.), B., 798.

Perkins, R. L., and Sweet, A. J., benzo-

nitriles, (P.), B., 651.

and Rapp, H. V., purification of [a]naphthylamine[-2-]sulphonic acid, (P.), B., 1175.

and Rausehert, B. L., improving [purifying] sulphonated hydroxyaromatic compounds, (P.), B., 1176.

and Riegler, R., vapour-phase oxidation [of naphthalene, etc.], (P.), B., 218.

and Robinson, J. D., nuclear alkylated aromatic [hydroxy-]compounds, (P.), B., 1314.

and Rogers, D. G., alizarin and its salts, (P.), B., 1027.

at. Association of Finishers of Textile Fabrics, and Amer. Assoc. of Textile Chemists & Colourists, safe and unsafe oil-stain removers on cotton and rayon grey goods, B., 537.

Nat. Association of Purchasing Agents, factors recommended for consideration in the selection of coal, B., 859.

Nat. Carbon Co., Inc., [scaling means for] dry cells, (P.), B., 1364.

See also Currie, L. M., and Johnson, A. S. Nat. Coke & Oil Co., Ltd., and Strevens, J. L., fuel briquettes, (P.), B., 1299.

Nat. Drug Co. See Greenbaum, F. R. Nat. Lead Co. See Stewart, A.

Nat. Oil Products Co. See Briod, A. E.
Nat. Smelting Co., Ltd., Robson, S., and Travers, M. W., recovery of sulphur from sulphurous gases, (P.), B., 136. See also Frost, J. G. G.

Nat. Standard Co., [rubber-]coated [steel]

articles, (P.), B., 148. and Domm, E. C., [rubber-]coated [steel] articles, (P.), B., 148. See also Pierce, R. C.

Nat. Sugar Refining Co., and Whymper, R., non-caking granular sugar, (P.), B., 382.

Nat. Tube Co. See Adams, O. P.
Nativelle, R., pathogenic power and filterable forms of bacteria, A., III, 147. Natschalnui, A. I., and Rafalovitsch, T. N., cause of longitudinal cracks on the surface of finished [steel] products,

B., 682.

Natta, G., electron diffraction examination of precipitated metals and their alloys, A., I, 290. New type of solid solutions between metals, A., I, 296. Synthesis of methyl alcohol and higher alcohols from water-gas, B., 756.

and Giuriani, A., electron diffraction examination of Cu-Pt solid solutions obtained by precipitation, A., I, 296.

and Passerini, L., dimorphism of white phosphorus, A., I, 403.

and Pastonesi, G., kinetics of synthesis of methyl alcohol, A., I, 525.

and Piontelli, R., utilisation of methane for production of hydrogen, B., 777.

and Rigamonti, R., crystal structure and molecular symmetry of solid hydrogen peroxide, A., I, 225. Electron diffraction investigation of some vinyl polymerides, A., I, 290.

(CIOIS)

Nattan-Larrier, L., and Grimard, L., effect of ageing on alexin content of human serum, A., III, 293. Combined action of heat and ageing on anticomplementary power, A., III, 294.

Grimard, L., and Dufour, J., action of heat on anti-complementary power of human serum, A., III, 197. Anticomplementary power of guinea-pig serum, A., III, 250. Alexin in the new-born, A., III, 293. Effect of ageing on anti-complementary power of human serum, A., III, 294. Relationship between alexin and anticomplementary power of serum, A., III, 337.

Natural Products Refining Co. See Vetter, J.J.

Naturin Ges.m.b.H., drying of artificial tubular products produced from animal fibrous material, (P.), B., 895.

Naucler, J. O., destroying or quenching of froth produced in the manufacture of yeast and similar processes, (P.), B., 1117. Nauk, G. See Hydrawerk Akt.-Ges.

Naumau, K. See under Nauman, R. Nauman, R., lithographic re-transfer paper, (P.), B., 431.

Naumann, K. See Gad, G. Naumenko, P., extraction of glycerol from sludge by mechanical stirring, B., 1077. Naumov, V. I., cast iron for sodium bisulphate boilers, B., 142.

Naunton, W. J. S. See Flint, C. F.

Nans, E. P., preparation for treating plants, (P.), B., 1108.

Nauta, W. I'., and Dienske, J. W., mesitylene derivatives. I. Formation of an ether from chloride [ω-chloro-derivatives] and methyl alcohol, A., II,

and Wuis, P. J., mesitylene derivatives. II. Derivatives of di-2:4:6-trimethylphenylmethane (dimesitylmethane),

A., II, 332.

Naves, Y. R., testing of lemon- and orange-peel oils. III. Oxidative change of the oils, B., 187. Presence of methyl alcohol and formaldehyde in essential oils and in their solutions in ethyl alcohol, B., 619.

Sabetay, S., and Palfray, L., analysis of

natural perfumes, B., 1133, 1268. See also Durand, J. F., and Sabetay, S. Navias, L., co-operative tests on mechanical strength of glass, B., 439.

See also Gen. Electric Co., and Hull, A. W.

Navratil, E. See Engel, P. Naylor, Ltd., J. H., and McLuckie, C., apparatus for giving an indication of the presence of inflammable gases and vapours, (P.), B., 644.

Nazarenko, M., gallic acid from tanning plants, B., 592.Nazarenko, V. A. See Poluektov, N. S.

Nazarov, I. B., aliphatic and aliphaticaromatic metalloketyls, A., II, 50.

Nazarov, I. N., fission and isomerisation of olefines. III. Fission of as-ditert .alkylethylenes and isomerisation of tert.-alkylvinyl radicals of the general type CR3 CCH2. IV. Fission of astert.-alkyl-sec.-alkylethylenes and isomerisation of sec.-alkylvinyl radicals of the general type, CHR, C.CH, A., II, 223. Synthesis of tertiary alcohols CR₃·CMe(OH)·CHR₄

and CR3 CMe(OH) CR3; action of magnesium methyl bromide on branched

ketones, A., II, 225.

Nazarov, I. N., alkylation of ketones by means of sodamide; propylation of ketones, A., II, 229, 323. Synthesis of tert.-alcohols of general formulæ OH·CMc2·CHR2 and OH·CMe2·CR3, by action of magnesium methyl bromide on highly branched ketones, A., 11, 323.

Nazarova, Z. N. See Tzukervanik, I. P. Neal, D. C., and Collins, E. R., concentration of ammonia necessary in a lowlime phase of Houston clay soil to kill cotton root-rot fungus, Phymatotrichum omnivorum, B., 1105.

Neal, O. R., and Walker, R. H., physiology of Rhizobium. V. Extent of oxidation of carbonaceous materials, A., III, 224.

See also Thorne, D. W.

Neal, R. H. See Vahlteich, H. W. Neal, W. M., and Ahmann, C. F., cobalt as an essential element in animal nutrition, A., III, 472.

Neale, L. C., oil paints, (P.), B., 471. Neale, R. C., protective action of certain purines against liver necrosis produced by carbon tetrachloride and chloroform, A., III, 390.

See also Forbes, J. C.

Neale, S. M., and Stringfellow, W. A., determination of the carboxylic acid group in oxycelluloses, B., 893.

Near, H. B., Pacini, A. J., Crosley, R. W., Gerth, M. M., Breidigam, F. T., Kelly, J. D., and Libby, McNeill & Libby, composition containing vegetable mucinous extract from plants, (P.), B., 1266.

Neary, G. J. See Devons, S.

Neave, D. P. C., copper and its alloys in automobile design, B., 448. and Miller, H. J., copper alloys, (P.), B.,

Neave, F. K. See Anderson, E. B., Herschdörfer, Z., and Kay, H. D.

Nebel, B. R., and Ruttle, M. L., storage of pollen from cultivated fruit trees, B., 389.

Neber, P. W., Burgard, A., and Thier, W., preparing a-amino- and ay-diamino-keto-compounds. II., A., II, 106. and Wörner, H., betaine-like compounds

of the pyridine series, A., II, 31. Necheles, H., Sapoznik, H. I., Arens, R., and Meyer, Jacob, influence of mucilaginous substances on emptying of

the stomacli, A., III, 24. See also Bloch, L.

Neddermeyer, S. H., and Anderson, C. D., absorption of electrons [in lead], A., I, 159. Nature of cosmic-ray particles, A., I, 390.

See also Anderson, C. D.

Nedler, V. V., spectral analysis of ores for nickel and tin, B., 795.

See also Levi, S. M.

Needham, D. M., phosphorylation of cozymase, A., III, 31. Co-enzymes in muscle metabolism, A., III, 222.

and Pillai, R. K., coupling of dismutations with esterification of phosphate in muscle, A., III, 346. Coupling of oxido-reductions and dismutations with esterification of phosphate in muscle, A., III, 471.

See also Baldwin, E., and Lehmann, Hermann.

Needham, J_{ij} , biochemistry and reversibility in evolution, A., III, 207.

and Lehmann, Hermann, glycolysis without phosphorylation in the chick embryo, A., III, 306. Glyceraldehyde and embryonic glucolysis, A., III, 346. Needham, J., and Lehmann, Hermann, intermediary carbohydrate metabolism in embryonic life. V. Phosphorylation cycles. VI. Glucolysis without phosphorylation. VII. Nature of non-phosphorylating glucolysis. VIII. Glyceraldehyde and glucolysis, A., III, 346, 471.

and Nowinski, W. W., intermediary earbohydrate metabolism in embryonic life. I. General aspects of anaërobic

glucolysis, A., III, 346.

Nowiński, W. W., Dixon, K. C., and Cook, R. P., intermediary carbohydrate metabolism in embryonic life. II. Formation and removal of pyruvic acid. III. Pasteur effect and the Meyerhof cycle. IV. Distribution of acid-soluble phosphorus, A., III, 346. See also Heatley, N. G.

Needham, W. See Sykes, C. Neelakantam, K., and Seshadri, T. R., pigments of cotton flowers. IV. Constitution of herbacitrin and herbacetin, A., II, 326. Gossypitrin, A., II, 445.

Neese, O., new optical instruments for

paper testing and fibre examination, B., 770.

Neffedjova, V. A. See Danilova, A. K. Neff, C. F. See Cowdry, E. V.

Neff, H. P., chemical proportioning and mixing apparatus, (P.), B., 632.

Negelein, E, preparation of the A-protein of fermentation enzyme, A., III, 31.

and Wulff, H. J., crystallisation of the protein of acetaldehyde reductase, A., III, 180. Dissociation constants and reactivity of acetaldehyde reductase, A., III, 311. Negi, S. See Kato, K.

Negishi, G. R., heat of fusion and vapour pressure of stannic iodide, A., I, 21. See also Hildebrand, J. H.

Negishi, M., Umezawa, H., and Mori, H., influence of atmospheric humidity on destruction of viscose rayon by ultraviolet rays, B., 1187.

Nègre, L., Berthelot, A., and Bretey, J., retarding action of subcutaneous injections of ethyl laurate, stearate, or palmitate on experimental tuberculosis in guinea-pigs, A., III, 59. Action of ethyl esters of certain saturated fatty acids on the development of experimental tuberculosis in the guinea-pig, A., III, 302.

Négresco, T., and Cook, W.J., constitution of the system SiO₂ + FeO + Fe₂O₃ + CaO(+ MgO), B., 43. Relation between composition of slags and their rôle in formation of steel, B., 43.

Negroni, P., biological relations in moniliasis of the skin and mucous membranes, A., III, 124. Capsules of Mycotorula albicans and other yeast-like fungi, A., III, 395. Neher, H. V. See Bowen, I. S., and

Millikan, R. A .: Nehlep, G., and Koepernik, K. H., Klein

accumulator with small self-discharge; B., 149. See also Jost, W.

Nehra, V., and Qureshi, M., diamagnetic susceptibility of heavy water, A., I, 352. Nehring, E., can addition of lactic acid adversely affect the sterilisation of

vegetable conserves? B., 614. Nehring, K., and Schramm, W., digestibility of some new urea-containing feeding-stuffs, B., 1403. Composition and digestibility of flax-husk chaff, B., 1403.

Neild, H. W., effects of p_H on water absorption and elimination of frogs during ether anæsthesia, A., III, 136. See also Burge, W. E.

Neill, G. A. W., simple tellurite-chocolateagar medium for typing and isolation of Corynebacterium diphtheria, A., III, 490.

Neill, J. C. See Riddet, W.

Neill, (Miss) M. See Woollett, G. H. Neill & Co. (Sheffield) Ltd., J., and Bower, W. L., [low-intensity] magnetic separators, (P.), B., 583.

Edwards, A., and Bower, W. L., [lowintensity] magnetic separators, (P.),

Neiman, M. See under Neuman, M. B. Neimand, M. See Lehrmau, A.

Neimann, W., pulverising, mixing, and working up in the clay industry, B., 1050.

Neimark, I. E. See Poljakov, M. V.
Neimark, M. E., Abramov, S. N., and Fischman, R. J., comparison of methods of technical analysis of coke, for standardisation purposes, B., 311.

and Petrenko, I. G., determination of volatile matter in coke for electrodes, B., 104.

Neimark, O. M. See Gorin, J. A.

Neiss, O., and Hanseatische Mühlenwerke A.-G., working up of soaps [soap stock], (P.), B., 259. Neklutina, V. F. See Lurie, J. J.

Nekoosa-Edwards Paper Co. See Luth, A. T.

Nekrasova, O. V., and Platonov, M. S., catalytic determination of oxygen in gas mixtures, A., I, 96.

Nekrassov, N. I., rôle of ions in gaseous chemical reactions in electrical discharge, A., I, 254.

See also Tokarev, N. V.

Nélis, P., production of staphylococcus antitoxin from anatoxins of different antigenic power, A., III, 294.

Neljubina, A.I., colorimetric determination of naphthionic acid in Neville-Winter

acid, B., 647.

Nellen, A. H., extrusion qualities of rubber; effect of temperature and mill-roll opening, B., 1090.

Nellensteyn, F. J., safety tube for uso with a water pump, A., I, 536. Theory and practice of asphalt and tar roads, B., 556.

Neller, J. R., relation of organic com-position of plants to growth and maturity, B., 1389.

Nelles, J. See Braun, J. von.
Nelms, J. C., treatment for improving bituminous coal, (P.), B., 1299.

Nelson, A. E., and California Fruit Growers Exchange, conditioning fruit, (P.), B., 979.

Nelson, A. F. See Forbes, G. S. Nelson, C. S. See Carborundum Co.

Nelson, E. A. See Bryan, C. S. Nelson, E. F. See Egloff, G., Universal

Oil Products Co., and Watson, K. M. Nelson, E. K., flavour of alcoholic bever-

ages, B., 1117.

and Lowman, M. S., composition of sweet basil oil from Virginia, B., 1407. See also Beavens, E. A., and Markley,

Nelson, H. A., zinc pigments, B., 809. Report of Sub-Committee [American Society for Testing Materials]. VII. Accelerated tests for protective coatings, B., 812.

Nelson, H. R., primary oxide film on iron, A., I, 130, 288.

Nelson, J. See Cantarow, A.
Nelson, J. A., butter of good keeping quality, B., 388.
Nelson, J. F. See Gilman, H.
Nelson, J. W. See Cartland, G. F.

Nelson, L. H., factors influencing segregatiou and solidification in steel ingots, B., 790.

Nelson, M. E., and Werkman, C. H., diversion of the normal heterolactic dissimilation by addition of hydrogen acceptors, A., III, 35.

Nelson, O. A., and Haller, H. L., constanttemperature bath for molecular stills, A., Î, 534.

Nelson, P. M. See Nelson, V. E.

Nelson, P. R. See Durfee, T. Nelson, R. A. See Southard, J. C.

Nelson, R. E., and Boase, G. S., selenium derivatives of salicylic acid, A., II, 313.

Rogers, A. O., and Purdue Research Foundation, products from trichloro-isobutane, (P.), B., 1310. See also Sparks, C. E.

Nelson, R. F. See Texas Co. Nelson, R. H., cold storage as a control for gladiolus thrips, B., 712. See also Weigel, C. A.

Nelson, V. E., Nelson, P. M., and Lowe, B., effect of hydrogenated lard, storage lard, and heated lard on destruction of vitamin-A in foods, B., 1399.

See also Keil, H. L., and Sutton, W. R.

Nelson, W. E., Seibert, F. B., and Long, E. R., factors affecting the tuberculin

test, A., III, 338.

Nelson, W. L., engineering properties of paraffin hydrocarbons, В., 315. Physical properties of olefino hydrocarbons, B., 752. Complex benzone hydrocarbons, B., 756. Simple benzene derivatives, B., 756. Multiring hydrocarbons, B., 757.

See also Cretcher, L. H.

Nelson, W. O., and Overholser, M. D., effect of estrogenic hormone on experimental pancreatic diabetes in the monkey, A., III, 40.

Nembrot, A., and Cadrobbi, B., properties of alligator fat, A., III, 168.

Němec, A., manurial action of saltpetre in relation to nitrogen content of the soil, B., 596. Composition of the mineral matter in scab-infected potato tubers, B., 822.

Němec, V., native (Czechoslovakian) tanning materials, B., 951.

See also Kubelka, V.

Nemenov, L. M., blackening of photographic plates under influence of positive ions, A., I, 145.

Nemilov, M. See Krestinski, V. N. Nemilov, V. A., and Rudnitski, A. A., gold-manganese alloys, A., I, 127. Platinum-ruthenium alloys, A., I, 357.

and Voronov, N. M., platinum-molybdenum alloys, A., I, 608.

Nemkova, O. G., Ordinskaja, E. S., Petin, N. N., and Chigerovitsch, M. I., aggregative and chemical stability of the disperse systems clay-pitch, B., 1056.

Nemtzova, $Z.\ N.$ See Tschajanov, $N.\ A.$ Nenitzescu, $C.\ D.$, origin of petroleum A., I, 588.

Nenitzescu, C. D., Cioranescu, E., and Cantuniari, I. P., reactions catalysed by aluminium chloride. XVI. Structure of the ketone obtained from methylcyclohexano and acetyl chloride, A., II, 152.

and Curcăneanu, D., halogen migration under influence of aluminium chloride.

III., A., II, 140.

and Gavăt, J., halogen migrations under the influence of aluminium chloride. IV., A., II, 456.

and Przemetzki, V., wandering of halogen atoms in carbon chains and rings. II. Halogen wandering in additive products of a-halogeno-ethers and olefines, A., II, 59.

Nepenin, N. N., and Jakimanski, V. V., bleaching of sulphite cellulose with chlorine, B., 1035.

Neppe, S. L., theoretical aspects of the use of [sewage] sludge gas as a fuel for internal-combustion engines, B., 868.

Neracher, O., and Reichstein, T., enrichment of vitamin-D from tunny-liver oil, A., III, 79.

Nerdel, F. See Hückel, W., and Neunhoeffer, O.

Neri, A., relation between taste and chemical constitution; naphthoisotriazine group. II.—IV., and VII.—IX., A., II, 433, 523.

and Grimaldi, (Signa.) G., relation between taste and chemical constitution; naphthoisotriazine group. I., V., and VI., A., II, 433, 523.

Nérot, G., and De Sacy, D., industrial experiments with some petroleum oils for carburetting water-gas, B., 313.

Norz, K., and Wagner, C., reaction between hydrogen peroxide and phosphorous acid induced by ferrous salts, A., I, 251. Nesbit, R. M., and McDonnell, C. H., low-

calorie, low-fat, ketogenie diet for treatment of infections of the urinary tract,

A., III, 171.

Neshitt, L. L. See Hopper, T. H.

Neshelskaja, R. G. See Sakostschikov, A.

Neskutschaev, V. See Bugakov, V.

Nesmejanov, A. N., mechanism of formation of mercuri-organic compounds through diazo-compounds, A., II, 282.

and Freidlina, R. C., structure of products of addition of mercury salts to unsaturated compounds by the arylation method, A., II, 221.

and Kotscheschkov, K. A., electronegative series of organic radicals, A., II, 282.

Kotscheschkov, K. A., and Puzireva, V. P., reduction of organic mercury compounds by tin alkyl compounds, as a method of synthesis of hydroxyand amino-aryl tin compounds, A., II, 221.

See also Freidlina, R. C.

Nespor, E., seasonal variations in the ascorbic acid content of the organs of the frog, A., III, 77. Fall of vita-min-C content during acute experimental scurvy in the guinea-pig, A., III, 463.

Nespor, P., [three-colour system of] reproduction of colour photographs or kinematographic films, (P.), B., 189.

Ness, A. R., significance of fat in the dairy ration, B., 1264.

Nesterova, E. A. See Prianischnikov, N. D.

Nesterova, V. I., electrostriction in colloiddisperse systems, A., I, 361.

and Petin, N. N., stabilisation and coagulation of diatomite suspensions, A., I, 361.

Petin, N. N., and Bogomolov, A. N., nature of sorption processes in the system diatomite-aqueous electrolyte, A., I, 361.

Nestler, E. Sec under Nauman, R. Nestler, L. See under Nauman, R.

Nestler, R. B., comparison of cod-liver oil and ultra-violet irradiation as sources of vitamin-D for confined laying hens, B., 976.

See also Titus, H. W.

Nesturch, K. F., discharge potential in

mercury vapour, A., I, 2. Netschaeva, N., influence of variables characterising quenching of high-frequency waves in oxidation of sulphur dioxide, A., I, 38.

See also Zalogin, N. G.

Netschitailo, M. K. See Borshkovski, S. E.

Netschvolodov, V. V., Sachs focussing camera for inverse roentgenograms, A., I, 266.

Netter, H. Sce Malorny, G.

Nettleship, G. E. See Imperial Chem. Industries.

Neu, R., spoilage of fats and oils; Kreis reaction and its carrier, B., 1234.

Neubauer, H., utility of laboratory methods for determining nutrient contents of soils, B., 1099.

Neuher, F., beeswax recovery from old combs and press-residues, B., 1367.

Neuberg, C., spontaneous separation of stereoisomerides, A., II, 175.

and Collatz, H., preparation of d-arabinose, A., II, 51. Decomposition of d-fructose-6-phosphorie acid to d-arabonic acid-5-phosphoric acid and enzymic scission of the latter, A., II, 52.

and Kobel, M., action of tobacco enzyme on rutin and other phenols, A., III, 66. Isolation of rutin from tobacco, B., 187. Occurrence of sorbitol in tobacco, B., 187.

and Minard, G., action of 4-quinoline-

pyruvic acid on yeast, A., III, 70. and Schweitzer, C. H., agar, A., II, 481. Neuberg-Rabinowitsch, I., fermentation of maltosecarboxylic acid and melibionic acid, A., III, 431.

Neuberger, A., dissociation constants and structures of zwitterions, A., I, 306. Dissociation constants and structures of glutamic acid and its esters, A., II, 9.

Neubert, P., applications of photo-thermometry, B., 189.

See also Hencky, K., and Lottermoser, A. Neuda, P., intensified hamolysis, A., III, 453.

Nene Glasindustrie Gesellschaft, G.m.b.H., glass pipe-lines, (P.), B., 140.
Nenenschwander, C. R., extraction of gold

by flotation and its relation to duration of foam treatment B., 571.

Neuert, H., angular distribution of the transmuted nuclei in transmutation of light nuclei by hydrogen positivo rays. I. and II., A., I, 161, 490.

Neufach, S. A., fate of glutathione introduced into blood in vitro, A., III, 90. Preparation of an extract of human liver capable of producing tumours, A., III, 122.

Neufeld, A. H., biochemistry of bromine. II. Bromine content of human tissues,

A., III, 251.

Neugebauer, H., and Brnnner, K., determination of berberine in homeopathic tinetures of Hydrastis canadensis, Berberis vulgaris, and B. aquifolium, B., 286. Evaluation of Chelidonium ϕ , B., 286. Stability of some homocopathic preparations, B., 1130.

Neugebauer, H. E. J., substance of the optimal pigments [in photography], B., 292. Theoretical basis of multi-colour printing, B., 622. Analogue of Beer's law for reflexion pigments, B., 1371.

Neugebauer, T., ionic deformation in binary crystals, A., I, 15. Calculation of ultraviolet absorption frequencies of alkali halides, A., I, 60. Stability of molecular and ionic lattices of hydrogen halides and alkali halides, A., I, 223.

Neugebauer, W., technique and forensic significance of the detection of bloodalcohol by Widmark's method, A., III,

Neugsehwender, A. See Wöhlisch, E. Neuhaus, A. See Darapsky, A.

Neuhaus, R., and Nukem Products Corp., acidproof tank, (P.), B., 994.

Neuhaus, T. A., and Glidden Co., crystallising [nitrocellulose] lacquers, (P.), B., 472.

Neujmin, G. G., and Terenin, A., decomposition of polyatomic molecules by Schumann radiation, A., I, 164.

Neujmin, H., diffuse bands in absorption spectrum of thallous chloride vapour, A., I, 8. Optical excitation of thallium spectrum in its halidesalt vapours, A., I, 8.

and Terenin, A., emission spectra of free radicals produced by photo-dissociation of polyatomic molecules in the Schumann ultra-violet, A., I, 60.

See also Popov, B. Neukom, O. W. Seo Union Oil Co. of

California. Neuman, M. B., "cold flame" oxidation of hydrocarbons, B., 1307.

and Tutakin, P. M., transition of cold into hot flame at low-temperature; auto-ignition of butane, A., 1, 34. Dissociation of peroxides and the cold flame of hydrocarbons, A., I, 523.

See also Aivazov, B. V., Belov, A. V., Gimmelman, G., and Michailova, M. N.

Neuman, R. S., Kargin, V. A., and Fokina, E. A., application of potentiometric titration to analysis of viscose during ripening, B., 1320.

Neumann, B., and Heintke, G., sulphuric acid catalysis with ferric oxide, A., I,

Neumann, E., and Healey, A. T., phosphorus oxychloride, (P.), B., 1203. and Lush, E. J., monocarboxylic acids, (P.), B., 1177.

Neumann, \hat{F} ., determination of methoxyl in highly methylated carbohydrates, A., II, 229.

and Hess, K., detection of the smallest quantities of terminal groups in polysaccharides, A., II, 232.

See also Arndt, F., and Hess, K. Neumann, G., technique of [steel-]furnace

atmospheres, B., 558. Neumann, H., magnetic hard iron-nickel-copper alloys, B., 562. Materials for

permanent magnets, B., 921. Büchner, A., and Reinboth, H., mechanically soft permanent magnet alloys of copper, nickel, and iron, B., 1215.

Neumann, J. See Hejduk, F. Neumann, K., combustion in the Diesel

engine, B., 408. Neumann, P. Seo Carlsohn, H.

Neumann, Walter. See Klemenc, A. Neumann, Wilhelm, glucosides of the oleander, A., II, 369. Synthetic derivatives of k-strophanthidin, A., III, 65. Comparative investigation of the pharmacological activity of natural and synthetic derivatives of k-strophanthidin, A., III, 425. and Lindner, W., placing the oleander

glycoside in the digitalis group, A., II, 445.

Neumann Research, Inc., H. T., colour concentrates, (P.), B., 947.

Neunhoeffer, O., tricyclohexylmethane series. III. Tri - p - cyclohexylphenylcarbinol; interaction of tricyclohexylmethyl bromide with metals, A., II, 16.

and Nerdel, F., tricyclohexylmethane series. II. Phenylcyclohexyl-substituted pinacols and pinacolins, A., II,

and Schlüter, R., tricyclohexylmethane series. IV. Reaction-kinetic investigations with esters of secondary alcohols, A., II, 16.

Neunkircher Eisenwerk Akt.-Gcs. vorm. Gebrüder Stumm, operation of gasheated metallurgical furnaces provided with regenerators, (P.), B., 509.

and Kugener, E., agglomeration of fine iron ores, (P.), B., 357.

Neunzig, H., chemical oxidation of aluminium foil by the M.B.V. process, B., 450.

Sco also Helling, W. Neurath, H., built-up films of proteins and their properties, A., I, 358.

See also Bull, H. B. Neurath, K. A., action of follicular hormone preparations and follicular hormone on the horse bean (Vicia faba minor), A., III, 151.

Neuroth, F. See Mabag Maschinen- & Apparatebau A.-G.

Neuschul, P. See Hermann, S. Neusser, E., complex cobaltammine per-

rhenates, A., 1, 195.

Neutard, E., variations in fat and protein contents of cow's milk during milking, A., III, 120.

Nenweiler, W., vitamin-C requirement during pregnancy and lactation, A., III, 44. Vitamin-C metabolism of the newborn, A., III, 154. Flavin metabolism of nowly-born children, A., III, 469.

Neuwirth, F., petrol from coal, B., 1153.

Neuwirth, I., distribution of glucose in blood, A., III, 248. Sugar content of heparinised and oxalated plasmas, A., IIÎ, 412.

Nevens, W. B., and Kuhlman, A. F., alfalfa [lucerne] silage, B., 1128.

Neverov, P. See Tsehishevski, N.
Nevett, R. D., application and functions of chemical reagents in flotation, B.,

Nevgi, M. B. See Bhatnagar, S. S.

Nevill, T. See Smith, B.
Neville, H. A., and Hazlehurst, T. H., effect of evaporation on stability of liquid films, A., I, 458.

Neville Co. See Anderson, G. K. Nevin, J. V., plywood, (P.), B., 788, 1346. Artificial lumber, (P.), B., 1346.

Nevitt, H. G., and Krchma, L. C., effect of temperature on the consistency of asphalts; viscosity-temperature susceptibility coefficient as an index, B.,

See also Mason, S.

Nevolin, F., and Koliv, A., soap from coriander seed, B., 805.

Nevros, K. I., and Zvorykin, I. A., variety of solonetz red soils in vicinity of Marcopoulo, Attica, B., 593.

New, A. A., measurement of electrolyto content of textiles, B., 654.

New, G. A., and Rooney, J. E., acoustical plaster composition, (P.), B., 677.

New, G. F., application of titanium oxide in industry, B., 156. Structure and mechanical properties of protective films, B.,

New Jersey Zinc Co., and Haslam, G. S., improving [elastic modulus of] rubber compounds, (P.), B., 374. and Waring, R. K., [zinc oxide] pig-

ments, (P.), B., 263.

See also Bunce, E. H., Depew, H. A., Kummer, G. A., Stutz, G. F. A., and Wilhelm, E.J.

New Process Rayon, Inc. See Furness, W.H.

New York Central Railroad Co. See Smith, Harry E.

New York Club, properties of linseed oil, heat-bodied in air and vacuum, and its behaviour with pigments, with and without wetting agents, B., 58. Colour standards [in paint factories], B., 157. Newall, A. P., heat treatment of metal

bars, (P.), B., 147. Newall, H. D., croloy-2 and -3M intermediate steels for [petroleum-]refinery service, B., 1215.

Newbold, J. A. See Hutchinson, R. Newburgh, L. H., Johnston, M. W., Lashmet, F. H., and Sheldon, J. M., measurement of heat production from

insensible loss of weight, A., III, 464.
Johnston, M. W., Wiley, F. H., Sheldon,
J. M., and Murrill, W. A., respiration chamber for use with human subjects, A., III, 465.

See also Conn, J. W. Newbury, W. L. See Todd, J. D.

Newcon Industries, Ltd., and Yarrow, W. S., air-conditioning plant, (P.), B., 1282.

Newell, N. D., effect of silicon on chromiummolybdenum steels for high-temperature service, with a note on the effect of copper, B., 1350.

Newell, W. C. See Mann, W. B.

Newell & Co., Ltd., E., Moss, A. H., and Kellington, N. A., pneumatic separators or classifiers, (P.), B., 303.

Newhouse, W. H., zonal gold mineralisation in Nova Scotia, A., I, 205.

and Glass, J. P., physical properties of certain iron oxides, A., I, 155.

Newington, F. H., and Lawrence, C. D., spectrographic analysis of paint, B., 369.

Newitt, D. M., Linstead, R. P., Sapiro, R. H., and Boorman, E. J., liquidphase reactions at high pressures. I. Hydrolysis of esters, and the Knoevenagel reaction, A., I, 417. and Schmidt, W. G., oxidation of propane.

II., A., I, 621.

and Semerano, G., formation of ethers by interaction of primary alcohols and olefines at high pressure, A., I, 134.

Newitt, D. M., and Thornes, L. S., oxidation of propane. I. and III., A., I, 621. See also Imperial Chem. Industries.

Newlin, I. G. See Vosbnrgh, W. C. Newman, E. L. See Means, E. A. Newman, E. S. See Ferry, R. M.

Newman, E. V., Dill, D. B., Edwards, H. T. and Webster, F. A., rate of lactic acid removal in exercise, A., III, 385.

Newman, F. H., carbon are in vacuum, A., I, 103. Glow discharge, A., I, 158. Newman, H. W., and Cutting, W. C., action

of dinitrophenol and insulin on metabolism of ethyl alcohol, A., III, 215. Effect of dosage on rate of disappearance of alcohol from the blood stream, A., III, 412.

and Lehman, A. J., disappearance of propylene glycol from the blood stream, A., III, 165.

See also Lehman, A.J.

Newman, J. E. See Curtis, E. E. Newman, M. S., synthesis of 1:2-benz-

anthracene derivatives related to 3:4benzpyrene, A., II, 375.

See also Fieser, L. F. Newns, G. II., and Wilson, R., mandelic acid in treatment of pyelitis in childhood, A., III, 59. See Pearson, W. J.

Newport, C. L., and Smith, H. C. [petroleum] retort lining, (P.), B., 15.

Newport Industries, Inc. See Bibb, C. H., Logan, W. B., and Zimmerli, A.

Newsome, P. T. See Sheppard, S. E.
Newson, H. W., radioactivity of oxygen,
silicon, and phosphorus, A., I, 162. Radioactivity induced in silicon and phosphorus by deuteron bombardment, A., I, 277. Transmutation functions at high bombarding energies, A., I, 277. See also Harkins, W. D.

Newton, Edwin B., and Goodrich Co., B. F., stable aqueous dispersions [rubber,

etc.], (P.), B., 266.

Newton, Eleanor B., chromogenic tungstate and its use in determination of uric acid

of blood, A., III, 371.

Newton, H. C. F. See Gimingham, C. T.

Newton, R. C. See Industrial Patents Corp., and Robinson, H. E.

Newton, R. F., and Eyring, H., partition function for liquids, A., I, 125.

Newton, R. H. See Copson, R. L., and

Dodge, B. F. Newton, W., Bosher, J. E., and Hastings, R. J., treatment of glasshouse soils with chloropicrin for control of Heterodera marioni (Cornu), Goodey, and other soil pathogens, B., 955. Nematode disease of bulbous iris caused by Ditylenchus dipsaci (Kühn, 1858), Filipjev, 1936; its control by bulb treatment, B., 959.

Newton, W. H., insensitivity of the cervix uteri to oxytocin, A., III, 349.

Newton, Chambers & Co., Ltd. See Allott, G. W.

Ney, L. F. See West, E. S.

Ney, M., new alkali for use in preparation of fine-grain developers, B., 1137.

Neye, A. R., determination of combustion, B., 200.

Neyman, E., behaviour of heavy-metal soaps in ofganic solvents, A., I, 28.

Neymark, M., distribution and metabolism of methyl alcohol in the dog, A., III, 20. and Widmark, E. M. P., effect of neutral fat, fatty acids and glycerol on metabolism of ethyl alcohol, A., III, 18.

Nga, (Mlle.) H. T., dyes of the anthracene group and their photosensitive capacity, A., I, 169. Photovoltaic effects of naphthylenediamines, A., I, 245.

Niacet Chemicals Corporation. See Cox.

Niagara Sprayer & Chemical Co., Inc. See Mewborne, R. G.

Nicaud, P., Laudat, M., and Gerbaux, J. variations in serum-lipins and in ratio of total lipins to cholesterol in icterohæmorrhagie spirochætosis, A., III, 343. Niccoli, E., first industrial plant in East Africa for recovering potassium salts from sea-water by the Niccoli process, B., 132.

Nichita, O., petrographic and chemical study of the region of the valleys Neagra and Haīta, A., I, 334.

Nichol, E. S., insulin-glucose therapy in heart dieasc, A., III, 14.

Nichol, H., Minnesota test for fat in ice cream, B., 972.

Nicholls, J. R., Mannich's method for determination of morphine, A., II, 360.

Nicholls, L. C., and Thomas, J. C., precipitation reaction viewing apparatus, A., I,

Nicholls, R. V. V. See Allen, C. F. H. Nichols, A. A., and Edwards, S. J., comparative values of plate count and modified methylene-blue reduction test in milk grading, B., 180.

Nichols, A. C. See Beck, L. V. Nichols, E. H., and Funkhouser Co.,

granular material, (P.), B., 1210.

Nichols, E. L., and Stanford, C. L., hydrogen effect in certain oxides, A., I, 321.

Nichols, J. B. See Bailey, E. D. Nichols, M. S. See De Witt, D. J., and Lea, W. L.

Nichols, R. D., and Jeffrey Mannig. Co., pulverising apparatus, (P.), B., 631. Nichols, R. R. See Wadsworth, A.

Nichols Copper Co. See Dyer, J. P.

Nichols Engineering & Research Corporation, treatment and incineration of sewago sludgo or similar waste material, (P.), B., 506, 626*. Drying and incinerating waste material, (P.), B., 991.

and Schroeder, P., apparatus for incinerating waste materials, (P.), B.,

Nichols Engineering & Research Corporation of Canada, Ltd. See Freeman, H. Nicholson, A. O., electrolytes for electric storage batteries, (P.), B., 461.

Nicholson, D. G., reaction of hydrogen peroxide with chromic anhydride in dry ethyl acetate, A., I, 94. Calcined mixtures of litharge and titanium dioxide; X-ray diffraction study, A., I, 412.

and Reiter, M. A., reaction of titanium tetrachloride with hydrogen peroxide

in dry ethyl acetate, A., I, 146.
Nicholson, E. P., oil filter, (P.), B., 644.
Nicholson, J. A. See Blakemore, F.
Nicholson, W. M. See Ellsworth, R.
Nickels, J. E. See Tongberg, C. O.

Nickels, L., and Allmand, A. J., electrical conductivities and viscosities at 25° of solutions of potassium, sodium, and lithium chlorides, in water and in onetenth molar hydrochloric acid, A., I, 507. Hittorf transference numbers of solutions of potassium, sodium, and lithium chlorides in water and in one-tenth molar hydrochloric acid, A., I, 519.

Nicloux, M., micro- and submicro-determination and identification of ethyl alcohol, A., II, 317. Diffusion of ethyl alcohol in marine animals, and the bound-water hypothesis, A., III, 261. Complete permeability of all tissues, including skin, of the frog to alcohol, A., III, 296. Alcohol content of the water of interstitial fluid and proto-plasm of an aquatic animal and that of the medium surrounding it; experimental demonstration in the frog, A., III, 348.

Nicol, H., animal hormones and plants,
A., III, 329. Fermented milks, B., 281.
Nicola, O. F. F., photochemical trans-

formation of ergosterol into vitamin-D, A., III, 155.

Nicolas, G., and Aggéry, B., persistence of

chlorophyll [in leaves] following bacterial action, A., III, 238. Nicolau, A., thermomagnetic study of

two paramagnetic solutions, A., I, 606. Nicolau, T. See Sumuleanu, C.

Nicolaysen, R., calcium and phosphorus requirements of rachitic rats, A., III, 90. Mode of action of vitamin-D. II. Influence on fæcal output of endogenous calcium and phosphorus in the rat. III. Influence on absorption of calcium and phosphorus in the rat. IV. Absorption of calcium chloride, xylose, and sodium sulphate from isolated loops of small intestine and of calcium chloride from abdominal cavity of the rat. V. Absorption of phosphates from isolated loops of the small intestine in the rat, A., III, 104, 156, 365.

See also Innes, J. R. M.

Nicolet, M., dissociation energy of carbon monoxide and abundance of elements in stellar atmospheres, A., I, 115. Theoretical determination of effects of absolute magnitude of molecular bands in stellar spectra, A., I, 342. Molecular hydrogen of stellar atmospheres, A., I, 539. New NH lines in spectrum of the sun, A., I, 546. Nicoletti, F., o-toluidine reaction in the

medico-legal detection of blood, A., III,

Nicolini, IV., resistance of light-metal wood screws to atmospheric attack, B., 355. Artificial oxide films improve the durability of paint coatings on light metals, B., 450.

Nicoll, W. D. See Du Pont de Nemours & Co., E. I.

Nicolls, J. H. H., and Mohr, C. B., analyses of coal and other solid fuels, 1934-6, B., 1292.

See also Gilmore, R. E.

Nicolosi, G. See Businco, A. Niculescu, M., influence of ammonium molybdate on acidity of sugar solutions, A., I, 415. Influence of boric acid on acetic fermentation, A., III, 146. Resistance of wines containing boric acid to "piqure," B., 719.
Niculescu, V. See Cerchez, V.
Nidecker, H. See Fischer, H. O. L.

Niebergall, W., de-aërating apparatus for absorption [ammonia] refrigerating machines, B., 1284.

Niederl, J. B., condensation products [of phenols with 4'-octadecenyl alcohol], (P.), B., 218.

and Hart, W. F., monohydroxyphenyl-xanthens, A., II, 257.

Niederl, J. B., Niederl, Y., Shapiro, S., and McGreal, M. E., equimolar condensations of aldehydes with phenols; preparation of primary saturated phenols, A., II, 336. Roth, R. T., and Plentl, A. A., anisyl-

malonic acid and its derivatives, A.,

11, 500.

and Smith, R. A., synthesis of long-chain substituted isocyclics and similarly substituted adipic acids. I. Preparation of 4-tert.-octylcyclo-hexanol, -hexene, -hexanone, -hexylhydroxylamine, amine, and -phenol.

and β-tert.-octyladipic acid, A., II, 241.
and Whitman, J. B., synthesis of longchain substituted isocyclics and similarly substituted adipic acids. II. Preparation of 2-tert.-octylcyclohexanone structure for o- and

p-alkylphenols, A., III, 241. Niederl, Y. See Niederl, J. B. Niederländer, K. See Reindel, F.

Niedieck & Co. Akt.-Ges., uncrushable velvet or similar fabric, (P.), B., 1332. Niekerk, J. van, pharmacological action of salts of pure zirconium and pure hafnium, A., III, 264.

Niel, C. B. van, metabolism of Thiorhodaceæ, A., III, 274.

Nielsen, A., rubber as chemical raw material, B., 1245.

Nielsen, A. H., substitution products of cryolite, A., I, 320.

and Nielsen, H. H., infra-red absorption spectra of the deuterium sulphides, A., I, 343.

Nielsen, F. A. See Behrens, C. A. Nielsen, H. H., interaction in molecules between rotation and slightly anisotropic oscillations, A., I, 602.

See also Ebers, E. S., Nielsen, A. H.,

and Sprague, A. D.

Neilsen, J. B., active carbon, with special reference to its use in gas masks, B., 1000. Nielsen, J. F., Crawford, F. W., and Huff, L. D., ultra-violet absorption spectrum of carbon disulphide vapour, A., I, 494.

Nielsen, J. R., and Ward, N. E., Raman spectrum and structure of the meta-

borate ion, A., I, 219.

Nielsen, L., sodium phenylethylbarbiturate solution for injection, A., II, 262. Stability of solutio hypnopheni [of the Danish Pharmacopæia, 1933], B., 1267.

See also Bang, O., and Christensen, H. Nielsen, N., growth-substance content of seeds of different ages, A., III, 106. Velocity of sedimentation of yeast, A., IlI, 484. Respiration during malting, B., 1258.

and Hartelius, V., separation of growthsubstances stimulating yeast and fungi, A., III, 143. Nitrogen assimil-ation of yeast. VIII. Excretion of nitrogen during growth, A., III, 270. See also Hevesy, G. von.

Nielsen, O., purification of fused metals, (P.), B., 251.

Nielsen, R. A., absolute values of electron drift velocity in nitrogen, helium, neon, and argon, A., I, 56.

and Bradbury, N. E., electron and negative ion mobilities in oxygen, air, nitrous oxide, and ammonia, A., 1, 106. Nielsen, R. F., effect of betaine on the conductivity of sodium hydroxide solu-

tions, A., I, 465. Nielsen, W. M. See Morgan, J. E., and Morgan, K. Z.

Nielson, H. See Greaves, H. Nieman, H. W., and Bethlehem Steel Co., treatment of sheet metal, (P.), B., 932.

Nieman, J. B. See Waterman, H. I. Niemann, C., Anderson, A. B., and Link, K. P., isolation and characterisation of a starch polysaccharide from the leaf tissue of the apple (Malus malus), A., 111, 51.

See also Bergmann, M. Niemann, R. See Klages, F.

Niemczycki, S., and Gerhardt, K., determination of ammonia in milk, A., III, 297.

Niemer, H. See Hahn, A. Nienburg, H., 3-aminopiperidine, A., II, 260. Nier, A. O., mass-spectrographic study of isotopes of argon, potassium, ribidium, zinc, and cadmium, A., I, 57.

and Hanson, E. E., mass-spectrographic analysis of the ions produced in HCl under electron impact, A., I, 4.

Nier, E. See Heiduschka, A. Nierenstein, M., constitution of catechin,

A., II, III. Nierhaus, H., development of coke ovens with special reference to modern types, B., 1293.

See also Lameck, P.
Nierkerk, J. van, Boer, A. G., Reerink,
E. H., and Wijk, A. van, determination of vitamin-D using chickens and relation

of rat- to chicken-activity for different irradiated provitamins, A., III, 327. Nierstrasz, C. A. See Kruyt, H. R.

Niessner, M., microchemical surface testing [of metals], B., 574. Foreign inclusions in metallic materials and their detection, B., 1217.

Nieuwenburg, C. J. van, acidimetric determination of water with acid chlorides, A., I. 260. Pneumatolytic synthesis of silicates, A., I, 527. Volumetric determination of small amounts of water by means of cinnamoyl chloride, A., I, 630.

and Brobbel, L. M., detection of malic acid by means of brucine, A., II, 176.

Nieuwland, J. A. See Du Pont de Nemours & Co., E. I., Kroeger, J. W., Sowa, F. J., and Vaughn, T. H. Niewiadomski, H., influence of certain

factors on liquefaction of potato starch, B., 606.

Nifontova, S. S. Seo Nametkin, S. S. Nigam, L. S. See Batham, H. N.

Niggemann, H., withdrawal of gas from the inner zones of coke ovens, B., 1152. Nightingale, (Miss) D., alloxantin series,

A., II, 308.

Nightingale, G. T., and Farnham, R. B., effects of nutrient concentration on anatomy, metabolism, and bud abscission

of sweet pea, A., III, 47. Nigudkar, K. D. See Prasad, M. Nihlén, \hat{H} . See Hägglund, E

Nihon Denki Kogyo Kabushiki Kaisha, Yonemura, S., Okazawa, T., and Osada, K., pure alumina and crude potassium sulphate from alunite, (P.), B., 238.

Niinomy, K., recent developments in the magnesite industry in Manchukuo, B., 236.

Niiranen, V., gasification of wood and peat, with special reference to the preparation of synthesis gas, B., 515.

Nijawan, S. D. Seo Singh, D. Nijboer, B. R. A. See Bonwkamp, C. J. Nijveld, W. J., determination of vitamin-A, A., III, 280.

See also Gerding, H.

Nikichkina, P., influence of sodium salts on crops of sugar beet in presence of nitrogen derived from different sources, B., 825.

Nikiforov, C. C., desert typo of soil formation, B., 476. Chernozem formation,

B., 1097.

Nikiforov, M., and Tschernak, K., effect of fat solvents and heavy hydrocarbons on detergent properties of soap, B., 805.

Nikiforov, V. K., theory of plastic flow of mineral suspensions, A., I, 27. Relationship between form of the functions T=f(M) and n=f(M) and number of

members, A., I, 607. and Runtzo, A. P., refraction law in periodic precipitates, A., I, 183. Causes of deviations from the fundamental law of the wave theory, A., I, 305. Influence of temperature on periodic reactions, A., I, 314.

and Sokolov, M. M., most probable b.p. of chemical compounds, A., I, 607.

See also Dudinski, M. N.

Nikitin, A. A., zeolitic copper compounds as fungicides, B., 959.

Myers, P. B., Adams, J. F., O'Kane, W. C., and Moore, P., fungicide and innectional (P.) B. 205 insecticide, (P.), B., 605.

Nikitin, B. A., chemical properties of the rare gases, A., I, 601.

Nikitin, $D_{\cdot \cdot}$, determination of saturated compounds in fats and oils, B., 57.

Nikitin, E. K., velocity of reaction between aldehydes and ketones. II. Reaction between furfuraldehydo and acetophenone. III. Reaction between benzaldehyde and acetone. IV. Reaction between benzaldehyde and acetophenono, A., I, 249. Rapid approximate determination of ketones, A., II, 5. Rapid approximate determination of acetone in aqueous solutions, A., II, 50. Velocity of reaction of furfuraldehyde with acetone, and its application. ation to determination of furfuraldehyde, A., II, 70. Rapid approximate determination of aldehydes and ketones. IV. Determination of benzaldehyde and acetone, A., II, 130. Detection of acetone in wood distillates, B.,

and Paul, I. I., determination of acetone by means of its reaction with furfur-aldehyde, A., II, 5. Relation between velocity of the Cannizzaro reaction and concentration of aldehyde. I. Cannizzaro reaction in formaldehyde solutions, A., II, 367.

and Verschinski, S. A., determination of acetone by reaction with salicylaldehyde, A., II, 368. Velocity of reaction between aldehydes and ketones. V. Reaction of vanillin with acctone, A.,

II, 378.

Nikitin, L. V., sound-sensitive state of certain metallic electrodes, A., I, 141. Influence of concentration of electrolyte on sound-sensitivity of platinum elec-5 trodes, A., I, 141. Fusion diagram for two components giving a euteotic and solid solutions, taking into con-sideration the degree of dispersion, A., I. 412.

Nikitin, N. I., Avidon, M., and Orlova, M., relationships between lignin and the hemi-celluloses. II., A., II, 27.

and Orlova, I. M., treatment of pine wood with dioxan and the composition of natural lignin. I., A., II, 27.

Nikitin, N. I., and Orlova, I. M., delignification of firwood by dioxan, and the composition of natural lignin, B., 656.

Nikitin, V., by-products of the catalytic synthesis of methyl alcohol. II., B., 1016.

Nikitina, E. A., preparation of phosphomolybdic acid, A., I, 577. Salts of phosphotungstic and metatungstic acids with organic bases, A., II, 115.

Nikitina, E, I., microchemical examination of products of corrosion of aluminium and magnesium alloys, B., 355. Nikitina, M. K. See Batalin, V. S.

Nikitine, S., theory of photodichroism (Weigert effect), A., I, 317. Flow dichroism of fluorescein solutions, A., I, 459.

See also Grabar, P.

Niklas, H., and Miller, M., mathematical representation of sorption ratios in microbiological manurial experiments, B., 1099.

and Poschenrieder, H., determining the magnesia requirement and manurial effect of magnesium in soils by means of Aspergillus niger, B., 71.

Niklewski, $B_{\cdot \cdot}$, and Wojciechowski, $J_{\cdot \cdot}$, influence of water-soluble humus substances on growth of some cultivated plants, B., 1251.

Nikolaev, A. A., theory of isomerisation of cyclic compounds, A., II, 91.

Nikolaev, A. V. See Kurnakov, N. S. Nikolaev, N. S., aluminium fluorosulphate, and its conversion into fluorides, A., I, 628.

and Milaschevitsch, V. L., preparation of cryolite from sodium and aluminium sulphates, B., 905.

Nikolaev, V. I., chemical indications and physicochemical investigation of salt

deposits, A., I, 587.
Bujalov, N. I., and Lepeschkov, I. N., genesis of the Permian salt deposits, A., I. 484.

and Dinkina, L. S., preparation of Glauber's salt and magnesium chloride from astrakhanite, B., 664.

and Frischmut, M. A., extraction of salts from lake sludge, B., 33.

Janatjeva, O. K., and Poljakov, V. D., potash deposits on the right bank of the Volga and in Calmuck, A., I, 484.

Koton, A. G., and Ogorodnikov, G. F., specific heat of aqueous systems containing sodium, potassium, and mag-

nesium chloride, A., I, 83. and Petrova, E. M., obtaining bromine from the sylvinite alkaline motherliquors, B., 666.

and Senjuta, A. K., dehydration of mirabilite in a vacuum, B., 1199.

Tschirkov, S. K., and Kogan, A. G., tertiary system potassium nitrate-nitric acid-water, A., I, 308. See also Kogan, A. G., and Rudenko,

E. I.

Nikolaeva, A. F. See Putschkov, P. V. Nikolaeva, M.A. See Preis, E.M. Nikolaeva, N.V. See Smorodincev, I.A.

Nikolai, J. A., alizarin cyanine green GWA and GT, the fast-to-milling members of the light-fast greens, B., 531.

Nikolić, D. See Šljivić, S. Nikolow, C., determination of zinc in copper alloys containing less than 0.5% of zinc, B., 568.

Nikolski, A. A., condensation of cellulose with benzene, A., II, 8.

Nikolski, B. P., and Vdovenko, V. M., p.d. between solid silver halides and aqueous solutions, A., I, 519.

Nikonova, I. See Berlin, L. E. Nilakantan, P., magnetic anisotropy of rhombic sulphur, A., I, 19. X-Ray studies of wood, lignin, and wood-cellulose, A., I, 226. Temperature variation of magnetic anisotropy of organic crystals, A., I, 451. Temperature variation of magnetic anisotropy of ammonium nitrate, A., I, 557. Magnetic anisotropy of naturally occurring substances. II. Molluscan shells, A., III, 86.

Nilkantum, S. V., salts of gluconic acid, A., II. 322.

Nilov, V. I., Nilova, V. P., and Trosehtschenko, A. T., enzymic oxidation of morphine in poppy-head latox, A., III, 159.

Nilova, V. P. See Nilov, V. I. Nilson, E. L. See Chapman, G. H. Nilson, H. W., cortico-adrenal insufficiency: metabolism studies on potassium, sodium, and chloride, A., III, 400.

See also Ingle, D.J.

Nilsson, I., glucosamine content of scrum in health and in pneumonia, A., III, 412.

Nilsson, R., metabolism of Azotobacter chroicoccum. I. Variability of the oxidation-reduction system with cultures on different media, A., III, 273.

Nimetz, A. See Donnally, H. H. Nims, L. F. See De Barenne, J. G. D. Nippe, W., determining cooking degree of

sulphite pulps, B., 425. Nipper, H., oil core sands and their testing, B., 929.

Nirenschtein, D. A., determination of heatrefractoriness of carboniferous refractory materials, B., 1052.

Nisbet, A. F. R., effects of lime on rye grass, B., 72.

Nischk, K., and Markhoff, F., electrolytic oxidation of aluminium in the patent literature, B., 146.

Nishi, G. See Sanada, Y.
Nishida, K., and Hashima, H., polysaccharides. X. Constitution of new
disaccharide "xyloglucuronic acid" from Kadsurajaponica, Don., A., II, 442.

and Miyama, R., wood substances. V. Yield and properties of cellulose from Manchurian conifers, B., 124.

Miyama, R., and Hashima, H., wood VII. Fundamental insubstances. vestigation of wood thinnings and their application for cellulose manufacture; wood constituents of wood thinnings. B., 893.

and Otani, M., wood substances. VI.
Use of wood thinnings for cellulose preparation and their fundamental investigation along and across the fibre, B., 423.

and Yamada, A., biochemistry of sotetsu, the Japanese sage plant. II. Chemical constituents, especially sex differences in stems, A., III, 158.

Nishida, Shigeru, effect of extracts of pituitary body on inorganic salts in blood of normal and hypophysectomised dogs, A., III, 149.

Nishida, Sotohiko, hard γ -rays from Ra-C+C'+C''+D, A., I, 438. Nishigori, S. See Sato, Tomoo.

Nishikawa, H., biochemistry of the filamentous fungi. V. Mycelial constituents of Oospora sulphureaochracea. II., A., III, 99. es at la luis du Calain.

Nishikawa, M. See Komagata, S.

Nishikawa, T., barbituric acid derivatives. I. Synthesis of 4-imino-5methylthiolbarbituric acid; preparation of [methyl] a-cyanopropionate. II. Comparison of 2-thiol compounds of 4-imino-5-methylthiobarbituric acid and 5-methylbarbituric acid, A., II, 34, 432.

Nishikawa, Y. See Ueno, Sei-ichi. Nishimori, T. See Matsuda, R.

Nishimura, H., welding of nickel and nickel alloys, B., 683.

Nishimura, S. See Nakahama, T. Nishima, T. See Honda, K.

Nishina, Y., and Ishii, C., cosmic-ray burst at a depth equivalent to 800 m. of water, A., I, 6.

Nishioka, U., equilibrium diagram of the ternary system CaO, TiO2, SiO2 CaO,SiO₂-CaO,Al₂O₃,2SiO₂, A., I, 618. See also Iwase, K.

Nishizawa, K., Hiraoka, S., and Hibino, S., Twitchell reagents. XX. Dipropylnaphthalenesulphonic acids, B., 804.

Kawasaki, T., and Hiraoka, S., Twitchell reagents. XVIII. Relation between the constitution of sulphonic acids and their [fat-splitting] properties, B., 151.

and Tokuriki, S., Twitchell reagents. XIX. Octadecylbenzenesulphonic acid, B., 804.

See also Amagasa, M.

Nishnik, A. Soe Izbekov, V. A.

Nisikado, Y., and Hirata, K., longevity of sclerotia of certain fungi under controlled environment factors, A., III, 485.

Nisiyama, Z., investigation of oligolytic saline concentration in blood by changes in diameter of the erythrocytes, A., III, 114.

Nisizawa, Y., etching of aluminium, (P.), B., 581.

Nissiat, removal of hydrogen sulphide from [producer] gas by catalytic oxidation, B., 1154. Purification of gas by catalytic oxidation of hydrogen sulphide, B., 1295.

Nitardy, F. W., and Squibb & Sons, E. R., purification of ether, (P.), B., 1171. Treatment and packaging of ether, (P.), B., 1171.

See also Aurelius, J. E.

Nitka, H. See Justi, E.

Nitralloy Corporation. See De Fries, II. A., and Lindemuth, L. B.

Nitroglycerin Aktiebolaget, electrolytic production of esters, (P.), B., 21.

Nitsche, E., and Waibel, F., determination of oxygen in copper, B., 246, 682.

Nitsche, H., minimum protein requirements

of resting horses, B., 1403. Nitsche, K. S., depreciation of ozokerite by

acid refining, B., 1007. Nitsche, R., testing and evaluation of synthetic resin moulding compositions, B.,

Nitschke, G., use of staple fibre from dyed viscose for production of fast colours on wool-staple fibre mixtures, B., 1195.

Nitta, I., and Suenaga, K., crystal structure of thiophosphoryl bromide, A., I, 172. Anomalous specific heat of tetradeuterammonium chloride, ND,Cl, in the crystalline state, A., I, 452.

and Watanabe, T., unit coll and space group of acetylsalicylic acid, A., 1, 172. Hydrogen bridges in solid pentaerythritol, A., I, 554.

Nitti, F., and Bovet, D., cleavage of certain azo-compounds in the animal organism and allergic phenomena produced by sulphonamidochrysoidine, A., III, 349.

Bovet, D., and Depierre, F., action of derivatives of p-aminophenylsulphon-amido (1162 F) on hæmolytic streptococci in vitro, A., III, 99. Allergic phenomena produced by aromatic amines, A., III, 216.

See also Fourneau, E., and Tréfouël, J. Nittis, S., clot prevention in blood studies

in animals, A., III, 413. Nitulescu, I. Sec Slatineanu, A.

Nitzescu, I. I., Benetato, G., and Oprean, R., metabolism of carbohydrates in avitaminosis- B_1 , A., III, 306.

and Georgescu, I. D., p_{II} and the buffering power of rat's muscle, A., III, 86. $p_{\rm II}$ and buffering power of the brain of normal and B_1 -avitaminotic pigeons, A., III, 103.

and Gontzea, I., liver and creatinuria, A., III, 266. Gonadotropic hormone of the anterior pituitary gland and creatinuria, A., III, 278. Growth hormone and creatinuria, A., III, 279.

Niwa, S., nickel alloys in steam-power plants, B., 353.
Niwase, Y. See Sata, N.
Nixon, A. See Sahyun, M.

Nixon, A. C. See Branch, G. E. K. Nixon, E. N. See Rogoff, J. M.

Nixon, I. G., purification of steam derived from saline waters, (P.), B., 1145.

Nixon, W., calculations for isotonic solutions; graphical method, A., III, 4. Niyogi, S. P., Patwardhan, V. N., and

Chitre, R. G., balanced diets. I., A., III, 344.

Niyogy, S., organo-metalloid compounds. I. and II., A., II, 40.

Nizovkin, V. K., dynamics of chemical adsorption, A., I, 25.

Njegovan, V., and Kranjčevič, M., determination of dry substance in liquid foods by means of sodium sulphate, B., 1127.

and Marjanović, V., quantitative precipitation at extreme concentrations. V., A., I, 147.

Noack, K., measurement of ageing tendency of automobile oils, B., 1299.

and Paechnatz, G., assimilation of form-

aldehyde by green plants, A., III, 442. Noack, W. G., and Akt.-Ges. Brown, Boveri & Co., heat exchanger, (P.), B., 630.

Noaillon, E., effects of dilatation on a cokeoven battery, B., 514.

Nobécourt, P., serial cultures of vegetable tissues grown on synthetic media, A., III,

Nobel, P. C. See Dorp, D. A. van. Nobel, W. See Blayden, H. E.

Nobili, L., c A., II, 125. quinine camphorsulphonates,

Noble, D. E.See Schwenk, H. S.

Noble, E. G. See Linstead, R. P. Noble, G. K. See Leblond, C. P.

Noble, R. L. See Cutting, W. C., and Dodds, E. C. Noble, W. M. See Anderson, M. S.

Noble & Wood Machine Co., apparatus for refining fibrous material in a liquid medium, (P.), B., 334.

Nockolds, S. R., contrasted differentiation, A., I, 204. Petrology of Barnavave, Carlingford, I.F.S.; an occurrence of quartz-bearing syenite and its xenoliths, A., I, 382. Fields of association of some rock-forming minerals, A., I, 586.

Noda, T., effects of addition of common salt during calcination of limestone. IV. Relation of rate of hydration of lime to condition of calcination. VI. Equation of reaction of calcium oxide with water, B., 1042.

and Kan, H., effects of addition of common salt during calcination of limestone. V. Rate of hydration and microscopical and X-ray examination of pure calcium oxide calcined under various conditions, B., 1042.

and Morisima, N., calcination of lime-stone. III. B., 1333.

Noddack, (Frau) I., ubiquity of the chemical elements, A., I, 4. Methods of predicting elements, A., I, 437.

Noddack, W., development of the periodic system, A., I, 437. Carbon in nature,

A., I, 585.

and Brukl, A., reduction potentials of tervalent [rare] earths, A., I, 364. and Komor, J., efficiency of utilisation

of sunlight in growth of green plants under natural conditions, A., III, 285. Utilisation of sunlight in the growth of green plants under natural conditions, B., 823.

See also Holleck, L. Noel, H. M. See Standard Oil Development Co.

Noel Associates, Inc. See Simjian, L. G. Noetzel, O., interesting cases from toxicological practice, B., 1267.

Nogami, H. See Asahina, Y. Nogaret, G. See Gay, L. Nogi, K. See Masayama, T.

Nogin, K., separation of furfuraldehyde from pyroligneous acid, B., 866.

Noguchi, K., geochemical investigations of volcanoes in Japan. I. Gases and spring waters of the volcano Asama. I., A., I, 430.

Noguchi, Takashi. See Tanaka, Y.
Noguchi, Takashige, electrolytic production of heavy water; relation between current density and isotope separation coefficient, A., I, 625.

Nolan, E. J. See Schumb, W. C.

Nolan, L. S. See Schumb, W. C.
Nolan, L. S., and Vickery, H. B., preparation of gliadin and zein, A., III, 191.
Nolan, P., and Jenkins, F. A., intensities in the ³Π, ³Σ band of PH, A., I, 60.
Nolan, T. J. See Breen, J., Kennedy, G., and Mohan, M.

Noll, A., plastoscope, for testing thermoplastic substances, B., 1237.

and Preiss, K., determination of sizing degree and water-permeability of papers, B., 894.

See also Zellstoff-Fabr. Waldhof.

W., conditions of formation of kaolin, montmorillonite, sericite, pyrophyllite, and analcime, A., I, 51. Occurrence of montmorillonite in some decomposition products of basalt in the Vogelsberg, A., I, 483. Synthetic clay minerals and a procelain from synthetic kaolin, B., 549.

See also Borsche, W. Nollan, E. H. See Du Pont de Nemours &

Co., E. I.
Nolle, J. K., pharmacology of convolvine,

A., III, 425.

Noller, C. R., saponins and sapogenins.
V. Oxidation products and structure of

chlorogenin, A., II, 346. Denyes, R. O., Gates, J. W., and Wasley, W. L., synthetical experiments in the chelidonine-sanguinarine group of alkaloids, A., II, 528.

Noller, C. R., and Girvin, M. D., synthesis of unsaturated fatty acids. II. Linoleic and λ -n-amyl- $\Delta^{0}\times$ -tridecadienoic acids, A., II, 227.

and White, W. R., composition of Grignard reagents as determined by precipitation with dioxan, A., II, 436.

Nolte, A.J., fermentation of orange juice as affected by addition of nitrogenous nutrients, B., 1259.

Nomals, P., sediments of gyttja at Gipka,

A., I, 588.

Nomura, S., and Imai, T., comparison of toxic effect of pyridine derivatives on ciliated cells of the oyster gill, A., III,

See also Terai, K.

Non-Mercuric Carrot Co. See Fabian, C. F. Non-Metallic Minerals, Inc., refractory products, (P.), B., 1207.

Non-Poisonous Gas Holding Co., Ltd., heat-exchange apparatus for effecting a catalytic reaction, (P.), B., 97. Nonpoisonous protective gases for industrial purposes, (P.), B., 112. Water-gas, (P.), B., 112.

Nonaka, I. See Tanaka, M. Noonan, W. J. See Hesseltine, H. C. Noponen, G. E. See Kolthoff, I. M.

Norberg, B., micro-determination of potass-

ium, A., I, 531. Nord, F. F., Hofstetter, H., and Dammann, E., mechanism of enzyme action. XV. Enzymic transformations by Fusarium lini, Bolley, and Fusarium oxysporum, A., III, 484. Enzymic decomposition by Fusaria; effect of adenylic and adenosinetriphosphoric acid on the living cell during alcoholic fermentation and dehydrogenation by Fusaria, A., III, 485.

Leichter, H., and Umbach, Guido, cryolysis of casein, A., I, 515.

See also Dammann, E., Leichter, H., and Rotini, O. T.

Nordberg Manufacturing Co., crushing devices, (P.), B., 302. Impact crushers, (P.), B., 510.

Nordbö, R., activity coefficients of calcium and oxalate ions in plasma; significance

of concentration of calcium ions in blood clotting, A., III, 293. Norddeutsche Seekabelwerke Akt.-Ges., packing material for goods which are sensitive to moisture, (P.), B., 1325.

Nordell, C. H., and Lakeside Eng. Corp., settling tank, (P.), B., 994.

Nordell, E., iron and manganese removal [from water] by zeolites and manganese-

zeolite processes, B., 192. Norden Laboratories. See Harris, L. E. Nordheim, G., Nordheim, L. W., Oppenheimer, J. R., and Serber, R., disintegra-

tion of high-energy protons, A., I, 440.

Nordheim, L. W., and Yost, F. L., matrix element in Fermi's theory of β-decay, A., I, 440.

See also Nordheim, G., and Peterson, E. L. Nordmann, application of spun glass and similar materials to heat insulation in railway vehicles, B., 851.

Nordmann, J. See Bezssonoff, N., and Reiss, P.

Nordsieck, A., low-frequency radiation of a scattered electron, A., I, 492. See also Bloch, F.

Norem, W. L., mineral nutrition and seasonal growth of Ageratum in sand cultures with auto-irrigation, A., III, 236. See also Livingston, B. E.

Norgorden, O., piezo-electric properties of Rochelle salt, A., I, 18.

Noriega del Aguila, M., hydrolysis of cholesteryl esters in blood with 50% alcohol; micro-determination, A., III, 248.

Norkin, N. N., calculation of heating of coke ovens by blast-furnace gas, B., 7.

Norkina, S. S., Narkuziev, T., and Orekhov, A. P., alkaloids of Anabasis aphylla. XII. Specific rotation of anabasine, in relation to method of extraction from the plant, nature of solvent, and the concentration, A., II, 310. Alkaloids of Genista tinctoria, A., II,

and Orekhov, A. P., alkaloids of Cytisus ratisbonensis, A., II, 311.

Norlin, G. See Theorell, H.

Norling, F., band spectra of ionised halogen hydrides. II. Hydrogen chloride and deuterium chloride. III. Fine structure and isotope effects in hydrogen chloride and deuterium chloride spectra; term

schemes, A., I, 215, 441.

Norman, A. G., association of xylan with cellulose in certain structural celluloses, A., III, 52. Hemicelluloses. III. Extraction and preparation, A., III, 445. Biological decomposition of lignin, A., III, 504. Compositions of less common vegetable fibres, B., 1185. Determination of lignin. III. Acid pretreatment and effect of the presence of nitrogenous substances, B., 1186.

and Barker, S. G., treatment of textile

materials, (P.), B., 1197. and Richardson, H. L., composition of forage crops. II. Rye grass (Western Wolths); changes in herbage and soil during growth, B., 1402.

Norman, D., effect of pre-exposure in spectrum photography, A., I, 317.

Norman, D. J. See Mason & Sons, Ltd.,

E. N.

Norman, P. W., and Aluminium Plant & Vessel Co., filter presses or like apparatus comprising a series of juxtaposed plate or frame members, (P.), B., 994.

Normann, W., fat hardening, B., 1232. Normand, A. R. See Kasbekar, G. S.

Normander, N. R., fermentation recorders [for dough], (P.), B., 727.

Normant, H. See Paul, R. Norrie, M. See Lemberg, R.

Norris, E. R., Simeon, M. K., and Williams, H. B., vitamin-B and -C content of marine algæ, A., III, 496 See also Weiser, R. S.

Norris, F. W., and Resch, C. E., pectic substance of plants. V. Nature of pectin and pectic acid, A., III, 503.

See also Angell, S., and Marshall, C. R. Norris, L. C. See Ringrose, A. T., and

Wilgus, H. S., jun. Norris, R. J. See Fardon, J. C.

Rhode Island, B., 1388.

Norrish, R. G. W., and Bamford, C. H. photodecomposition of aldehydes and

ketones, A., I, 91, 471. and Foord, S. G., kinetics of combustion of methane, A., I, 189.

See also Buckler, E. J., Hirschlaff, E., McDonald, R. D., and Stevens, G. W.W. Norsk Spraengstofindustri, A./S., apparatus for treatment of plastic explosives for

production of ribbon- or rod-shaped pieces, (P.), B., 1281.

North, C. W. See Brit. Celanese.

North, H. F. A., earthworm control in

North American Rayon Corporation. Bley, R. S., Byron, T. H., Etzkorn, R., Lappe, F., and Taylor, J. I.

North British Rayon, Ltd., and Hartley, W., treatment of artificial silk cakes, (P.), B., 28.

North Shore News Co. See Bauer, P. S. Northcott, L., effect of cast structure on rolling properties of zinc, B., 923.

Northern Paper Mills. See Youtz, M.A.Northfield, D. W. C., and Russell, D. S., fate of thorium dioxide (thorotrast) in cerebral arteriography, A., III, 133.

Northrop, J. H. See Anson, M. L., and Holter, H.

Northwest Paper Co. See Aronovsky, S. I., and Hoffman, W. F.

Norton, A. J., Less, F. W., and Gen. Plastics, [phenol-terpineol] synthetic resin for varnishes, (P.), B., 1241.

Norton, B., apparatus for separating dust from coal or similar coarse material, (P.), В., 111.

Norton, C. L., and Massachusetts Institute of Technology, fibrous or filamentary material [from viscose liquids], (P.), B., 1322.

Norton, C. L., jun., and Babcock & Wileox Co., refractories, (P.), B., 1053.

Norton, F. H., accelerated weathering of felspars, A., I, 206. Control of crystalline glazes, B., 913.

and Hass, H. B., action of magnesium diethyl on methyl derivatives of ethylene oxide, A., II, 2.

Norton, F. J. See Marshall, A. L.
Norton, J. T., uses and limitations of
X-ray diffraction methods, A., I,
446. Application of X-ray methods to problems of cold-work, preferred orientation, and recrystallisation [in metals], B., 801. Principles of radiographic process, B., 801.

See also Mooradian, V. G., and Talbot, A. M.

Norton, R. A. See Musgrave, G. W. Norton Co., crystalline alumina, (P.), B.,

See also Anderson, N. G., Howe, W. L., Ridgway, R. R., and Webster, D. E.

Norton Grinding Wheel Co., Ltd., grinding wheels, (P.), B., 140. Abrasive articles, (P.), B., 551. Grinding or abrasive wheels, (P.), B., 1054. Rubber-bonded abrasive wheels and other abrasive bodies, (P.), B., 1207.

Norvig, J., and Internat. Cement Corp., cement, (P.), B., 1210.

Norwood, A. F. B., recovery of gold from

ores, (P.), B., 358.

Norwood, H. Y., and Taylor Instrument Cos., thermometer, (P.), B., 302.

Nosaka, K., microchemical reactions for detecting constituents of blood and urine, A., III, 452.

Nosalevitsch, K. M., treatment of ammonia liquor in saturators, B., 747.

Noskov, M. M., thermo-magnetic Nernst effect in cuprous oxide, A., I, 351.

Nosoff, M., purification of beet juice with lime and carbon dioxide, B., 1110.

Nossen, E., Leclanché [electric primary] cells and depolarisers for same, (P.), B., 461.

Nostitz, A. von, influence on soil of sawdust used as cattle-stall litter, B., 708.

Nosu, S. I. See Kasahara, M. Notevarp, O., vitamin content of marine

oils, B., 807.

Nothdurft, W., thermal conductivity of heavy hydrogen, A., I, 125. Absolute determination of thermal conductivity of gases, A., I, 125.

Notomi, H., application of nickel alloys in generators, B., 353.

Nottelle, L. E., and Herzmark, N., explosive cartridges [for starting internalcombustion engines], (P.), B., 190. Nottin, P., flour analysis, B., 969.

and Daron, A., Pelshenke test and baking

value [of wheats], B., 384.

Nottingham, W. B., potential and luminescence of insulated willemite cathode-ray screens, A., I, 283. Influence of electron reflexion on photo-electric emission, A., I, 541. Hypotheses for photoelectric emission analysis, A., I, 541.

Nourse, I. C., fuel compounds, (P.), B., 1163.

Novac, A. Sco Baltaceanu, G. Novak, F. V. See Behounek, F. Novak, I. J., and Raybestos-Manhattan, Inc., saturated fibrous products, (P.), B., 772. Friction material, (P.), B., 997.

Novák, J., polarographic studies with the dropping mercury cathode. LXVIII.
Hydrogen over-potential in light and
heavy water, A., I, 414.
Novakovskaja, R. S., separation of potass-

ium chlorate from mother-liquor by adding excess of potassium chloride, B., 903.

Novikoff, V. Sco Bouf, F. Novikov, A. N., and Prokopenko, G. S. preparation of solutions of tin sulphate for electroplating, B., 541.

Novikova, A. F. See Kirsanov, A. V. Novikova, E. N. See Jermolenko, N. F. Novocel Chemical Manufacturing Co., Inc., [receptacle for] storing and preserving local anæsthetic solutions liable to decomposition on oxidation, (P.), B., 1274. Novodranov, J. K., physico-chemical pro-

perties of alginic acid, A., I, 133. Novoselova, A. V., preparation of beryllium nitrate, A., I, 92.

and Vorobieva, O. I., iodometric determination of beryllium in complex fluorides, A., I, 327.

See also Lejkina, B. N.

Novoselova, G. See Sadikov, V. S.

Nowacki, W., fifty years of general theory of crystal structure, A., I, 225.

Nowak, B., cheese from milk, (P.), B., 978. Nowak, P., and Hofmeier, H., possibility of the use of new synthetic materials [in the electrical industry], B., 259.

Nowatke, W., dialysis of solutions through collodion membranes. I. Dialysis constants of sodium and potassium chloride in presence of cortain substances, A., I, I30.

Nowinski, W. W. See Needham, J. Nowotnowna, A., distribution of mannan

in some gymnosperms, A., III, 51.

Nowotny, H., and Halla, F., wüstito phase,
A., I, 68. X-Ray investigation of the system manganese-arsenic. I., A., I, 508.

See also Halla, F.

Noyes, A. A., Coryell, C. D., Stitt, F., and Kossiakoff, A., argentic salts in acid solution. IV. Kinetics of reduction by water and formation by ozone of argentic silver in nitric acid solution, A., I, 466.

and Deahl, T. J., strong oxidising agents in nitric acid solution. III. Oxidation potential of cobaltous-cobaltic salts: kinetics of the reduction of cobaltic salts by water, A., I, 465.

Noyes, A. A., DeVault, D., Coryell, C. D., and Deahl, T. J., argentic salts in acid solution. V. Oxidation potentials, equilibria with higher silver oxides, and formation of nitrate complexes, A., I, 465.

Noyes, W. A., Hoffmanu, G. F., and Pittsburgh Plate Glass Co., resin-like mater-

ials, (P.), B., 158.

Noyes, W. A., jun., comparison of some ultra-violet absorption spectra of polyatomic molecules with those of diatomic molecules, A., I, 164.

Noyons, E., determination of residual nitrogen in blood, plasma, serum, etc., A., III, 82. Apparatus for the preparation of doubly distilled water, A., I, 429.

Nozaki, H. See Goto, K.
Nozdrev, V. Seo Lanin, V.
Nozoe, T., colour reactions of carbohydrates. I. Spectrophotometric examination of common colour reactions, A., II, 6.

and Kinugasa, T., polyterpenoids and their glucosides. III. A₁- and A₂- Barrigenol. IV. A₁-Barrigenol and its crystalline acyl derivatives. V. A₁-Barrigenol; acotyl-A₁-barrigenol and its acyl derivatives. VI. Saponin from the bark of Schima kankaoensis, Hay, A., II, 27.

Nu Size Co., Inc. See Burgard, C. R.

Nuccorini, R. [with Bartoli, O.], ripening of rowan berries, A., III, 409.

[with Zaccagnini, Cerri, F., Ducci, G., Martelli, U., and Bagnoli, E.], carly and late ripening [of fruit], A., III,

Nučić, Č., apparatus for electrodialysis, A.,

Nudelman, S. L., appliance for evaluating Debye diagrams and determination of parameters, A., I. 201.

Numann, E. See Encken, A.

Numann, W., conductivity of calcium hydrogen carbonato and determination of sulphate and total hardness in natural waters by electrical conductivity, A., I, 33.

Nüssel, H., and Henneke, H., analysis of bitumen- and tar-mineral mixtures, B.,

556, 676.

Nugent, R. A. See Luth, A. T. Nugent, R. L., and Towle, L. W., albuminglobulin ratios in synthetic solutions deduced from determinations of sp. gr. and relative viscosity, A., III, 82.

Nukada, M., extract from silkworm pupæ as a useful substitute for meat extract in preparation of bacteriological culture media, A., III, 37.

Nukada, S., and Yoshii, T., effect of minimal amounts of heterobacteria on degree of fever induced by influenza bacillus, A., III, 357.

Nukem Products Corporation. See Neuhaus, R.

Nukita, Y., influence of various substances on change of state of uric acid in serum. III., A., III, 23. Action of ephedrine on isolated rabbit intestine. I. and II., A., III, 27.

Nukols, S. B., use of actual and competitive yield data from sugar-beet experiments, B., 1253.

Numaziri, S., hard-rubber reactions. IV.

and V., B., 815. Nungester, W. J., and Klein, L. F., effect of pneumococcus type III specific polysaccharide on sedimentation of blood cells, A., III, 293,

Nuret, H. See Lemoigne, M.

Nurnberger, C. E., production of hydrogen peroxide in water by a-rays, A., I, 40. Decomposition of air-free water by a-rays, A., I, 319. Ionisation theory and radio-biological reactions, A., I, 371.

and Livingston, R., kinetics of colouring of glass by X-rays, A., I, 472.

Nusbaum, C. See Boyer, R. F.

Nusinov, G. O., absorption of hydrogen sulphide by thioarsenate solutions, B., 341. Regeneration of spent liquor in the arsenito method of removing sulphur from gases, B., 1046.

Nussbrecher, A. M., and Morton, F., idiopathic steatorrhea, A., III, 379.

Nutman, F. J., inexpensive recording manometer, A., III, 162. Physiology of Coffea arabica. I. Photo-synthesis of coffee leaves under natural conditions, A., III, 443.

Nutt. D. B., and Altshuler, J. A., treating light [petroleum] distillates by the lead sulphide process, B., 1156.

See also Standard Oil Co. of California. Nutting, G. C., and Spedding, F. H., line absorption spectrum of gadolinium ion in crystals, A., I, 11I. See also Spedding, F. H.

Nutting, H. S. See Dow Chem. Co. Nutting, L. See Rysselberghe, P. van. Nutting, P. G., bleaching-clay industry, B.,

133. Bleach clay solubility, B., 1199.

Nutting, R. C. Sco Shaw, A. O. Nutting, R. D. See Lewis, W. K.

Nydahl, F., nitrogen determination in saltpetre, B., 1043.

Nye, \hat{A} . W., absorption of cosmic radiation in matter, A., I, 163.

Nye, R. N., relative in vitro activity of certain antiseptics in aqueous solution, A., III, 183.

Nyeboe & Nissen A./S., devices for removing accumulated solid matter from strainer gratings, (P.), B., 304.

Nyegaard & Co., A./S., vitamin preparations, (P.), B., 291. Production and refining of organ extracts, (P.), B., 1273. Nyka, W. See Loiseleur, J.

Nylen, P., hydrogen electrodo without streaming hydrogen, A., I, 49. Behaviour of hypophosphorous and phosphorous acids and their mono-esters towards iodine; comparative kinetic study, A., I, 248. Kinetics of hydrolysis of dialkyl phosphites. I. By hydrogen and hydroxyl ions. II. Acid and base

catalysis, A., I, 314. Nyman, G. A., retene and dihydroretene, A., II, 156.

Nyström, H. See Schlenk, F. Nyul, G. Sco Varga, J.

0.

Oakite Products, Inc. See Johnson, C. Oakley, H. B., hydration of gum arabic and glycogen, A., I, 184. Osmotic pressure of gum arabic. III. Ionisation of sodium, calcium, and acid gums, A., I,

Oakley, P. See Tullis, D. R. Oaks, H. H., and Bradt, W. E., electrodeposition of manganese from aqueous solutions. I. Chloride electrolytes. II. Sulphate electrolytes, B., 798.

Oakwood, T. S. See Marker, R. E.

Obenauer, K., alteration of fluorescence colours on fresh cleavage surfaces of calcite, A., I, 430.

See also Grün, R. Ober, II. See Heiduschka, A.

Oberbach, J., boiling test for adhesion [of bituminous binders to stones] according to Riedel and Weber, and practice, B.,

Oberdisse, K., and Eckardt, M., specific dynamic action of protein and ammoniaproduction using the isolated kidney, A., III, 258.

Oberhauser, J. See Dingwall, G. Oberholzer, P. G. J., decomposition of organic matter in relation to soil fertility in arid and semi-arid regions, B., 165. Oberlander, T. F., leather preparations by

the Wiley mill, B., 951.

Oberlin, M. See Ruzicka, L. Obermayer, E., growing and selection of

Hungarian paprika, B., 958.
Obermayer, M. E., and Becker, S. W., coal tar and allied substances, A., III, 462.

Oberseider, J. L., Robison, P. L., and Atlantic Refining Co., treatment of [oilrefinery] blackstrap sludge, (P.), B., 1304. Oberst, F. W. See Andersch, M.

Oberwegner, M. E. See Madelung, W. Obi, K. See Aoki, Y.

Obinata, I., and Hagiya, M., equilibrium diagram of the silver-rich silver-aluminium alloys: nature of transformations, A., I, 177.

Obitz, G., application of a quinine-calcium gluconate preparation in influenza, A., III, 14.

Obořil, F. See Bertl, E. Obosni, I. S., supervision of the strawcooking process, B., 1321.

Obrebski, J., heat treatment of large nickelchromium steel castings, B., 1351.

Obreimov, I. V., and Prichotko, absorption spectra of crystals at low temperatures. II. Absorption spectrum of phenanthrene at 20° abs. III. Spectrum of anthracene at 20° abs., A., I, 111.

O'Brien, B., treatment of substances and forming films, (P.), B., 306. Irradiation of substances, (P.), B., 306. O'Brien, C. S. See Salit, W.

O'Brien, D. G., and Dennis, R. W. G., "raan" or boron deficiency in swedes, B., 72.

O'Brien, F. T. See Wilhelmi, C. M. O'Brien, H. See Bosworth, M. W., and

Stadie, W. C. O'Brien, W.J., soya-bean proteins, B., 183. O'Bryan, H.M., optical constants of

several metals in vacuum, A., I, 290. Soft X-ray absorption of lithium and its halides, A., I, 540.

See also Schneider, E. G. Obst, W., "oil-rubber" or factice as restricted substitute [for rubber] in rubber goods, B., 815. Utilisation of coumarone resins, B., 944.

Obtulowicz, M. See Schaaf, F. Obuchovski, J. M., Stomachin, J. B., and Dshjobadse, S. A., ferro-coke, B., 7.

Obukov, A. P., and Lavrov, V. P., ternary system: magnesium chloride-waterhydrogen chloride, B., 132.

and Michailova, M. N., production of aluminium oxide by the magnesium chloride method, B., 132.

Michailova, M. N., and Koposova, V. I., properties of magnesium oxide obtained by hydrolysis of magnesium chloride, B., 132.

Obukov, A.P., Michailova, M.N., Koposova, V. I., and Bukvin, A. A., hydrolytic study of the system MgCl₂+H₂0= 2HCl+MgO, B., 132.

See also Bergman, A. G., and Golovkov, M. P.

Occleshaw, V. J., reaction between aqueous silver nitrate and cuprous thiocyanate; indirect argentometric method for the determination of copper and a "spot" test for silver, A., I, 532.
O'Ceallaigh, C. See Dervichian, D. G.

Ochi, S., Yamazaki, J., and Sumiya, S., thermal decomposition of wood and the effects of alkali salts of various organic acids on it. I. and II., B., 1057.

Ochiai, E., Miyaki, K., and Soto, S., synthesis of 2:5-naphthyridine derivatives, A., II, 469.

See also Kondo, H.

Ochoa, S., enzymic formation of lactic acid in heart muscle, A., III, 212. Isolation of pure cozymase from the muscle of warm-blooded animals, A., 1II, 394.

See also Ohlmeyer, P.

Ochse, W., effect of feeding goats' milk to rats, A., III, 61.

Ochsner, A., and Mahorner, H. R., bactericidal effect of hirudin and heparin. I. Intravenous injection and leeching in experimental bacteremia, A., III, 148.

Ocon, E. A., conversion of high-b.p. hydrocarbons into low-b.p. products, (P.), B., 645.

O'Connell, T. See Parkes, J. W. O'Connor, C. T., does alkali-resistance mean durability [of varnish films]? B.,

O'Connor, E. A., degree of dissociation of bi-valent salts in very dilute aqueous solution, A., I, 139.

O'Connor, W.J., salt and water metabolism of nephrectomised rabbits. I. Effect of injection of water or glucose solutions, A., III, 347.

See also Feldberg, W. O'Conor, J. S., β -ray spectrum of radium-E, A., I, 543.

Oculus, clarification of liquid soaps, B., 1365.

Oda, K. See Matsui, M.

Oda, R., and Tamura, K., halogenation of aromatic and aliphatic compounds, A., II, 489. Kinetics of production of anthraquinone compounds from benzoylbenzoic acid derivatives, A., II, 507.

Sec also Lauer, K.

Odake, S., and Yamagishi, T., oryzanin, "antineuritic vitamin-B." VI. Constitution of oryzanin, A., II, 354.

Oddo, B., and Raffa, (Signa.) L., glyoxaline group. VI. Opening of the benziminazole ring, A., ÎI, 520.

Oddo, G., nitrosyl of A. Angeli, A., I, 195. Molecular constitution of naphthalene, A., II, 373.

Ode, W. H., and Selvig, W. A., low-temperature distillation tests of sub-bituminous coal from the Denver Region coal field, Colorado, B., 862.

Odelberg, A. S. W., pottery, B., 440. Odell, A. D., Skill, D. I., and Marrian, G. F. estrogenic potency of orally administered æstriolglycuronide, A., III, 437.

See also Cohen, S. L. Odell, A. F., after four years of physical development [of plates and films], B., 731.

Odell, A. F., and Du Pont Viscoloid Co., [cellulose ester] fountain-pen barrel, (P.),

B., 1240. Odell, W. Hell, W. W., treating and odorising [combustible] gas, (P.), B., 14.

Oding, I. A., theory of limit of fatigue of metals, with asymmetrical cycles, and a complex strained state, B., 1067.

Odintzova, S. V. See Schtatnov, V. I. Odland, T. E., and Knoblauch, H. C., comparison of different bedding materials and chemical supplements with cow manure applied in a 3-year rotation, B.,

Odone, F., absolute temperature T, and the principal thermodynamic relationships, A., I, 124. Electrical equilibrium in systems of metallic conductors only, and permanent thermo-electric currents in complete metallic circuits, A., I, 395. O'Donnell, L., mining of sulphur, (P.), B.,

O'Dwyer, M. H., hemicelluloses of the wood of English oak. III. Fractionation of hemicellulose-A, A., III, 161.

Oechslin, C. See Mayer, R. L.

Oeda, H., catalytic hydrogenation of amides of α-hydroxy-acids, A., II, 235,

Oeffinger, E. F. See Du Pont de Nemours

& Co., E. I. Ohman, V., electrochemical preparation of nitric esters, A., II, 45.

and Laurent, G., vapour pressure of nitroglycol, A., I, 22. Interferometric determination of potassium nitrate in

black powder, B., 396. Oehme, O., adrenal cortex hormone, ascorbic acid, and amino-acids in

experimental hyperthyroidism, A., III,

See also Kaden, E. Öholm, L. W., diffusion of beryllium salts in aqueous solution, A., I, 507.

Oelkers, H. A., pharmacology of arsenic and antimony, A., III, 267. Oelmann, A See Hilpert, R. S.

Oelrichs, L., vitamin deficiency, infection, and prevention of disease, A., III, 76.

Oelsen, W., heat of formation of binary and ternary alloys and their significance for metallurgical reactions, A., I, 509.

and Kremer, G., behaviour of melts of iron, nickel, and manganese towards their liquid silicates and solid silicio

acid at 1600°, A., I, 413.
and Middel, W., thermochemistry of alloys. I. Direct determination of heats of formation of the alloy series cobalt-silicon, iron-aluminium, cobaltaluminium, nickel-aluminium, copperaluminium, and antimony-zinc in the cast condition, A., I, 455.

and Samson-Himmelstjerna, H. O. von, heats of formation of nickel-silicon

alloys and melts, A., I, 406.

See also Körber, F. Öman, E., Göth, H. E. A., and Industrikemiska Aktieb., concentrating lyes obtained in the cellulose industry, (P.), B., 428.

Oeming, L. F., industrial wastes and their effects on municipal sewage-treatment plants, B., 1138.

Oenslager, G., and Goodrich Co., B. F., mould for plaster casting, (P.), B., 1373. Oeriu, S. See Balanesco, V. I.

Ørskov, S. L., individual differences in permeability of erythrocytes of rabbits; effect of bleeding, A., III, 194.

Örström, A., influence of carbon monoxide on respiration of the yeast cell in different media; physiology of fertilisation, A., III, 33. Metabolism of ammonia in sea urchin's eggs, A., III, 262.

Oertel, A. C., practicability of spectro-graphic determination of minor components of soils, B., 595.

Örtenblad, B. See Myrbäck, K. Oertling, Ltd., L. See Wallis, V. C.

Oeser, E. A., and Tuck, J. L., radioactive isotopes of copper, A., I, 439. See also Lasnitzki, A.

Oeserwerk, E., Oeser & Söhne Komm.-Ges., electrolytic production of metal foil, (P.), B., 1227.

Oesterle, P., effect of products of sterilisation [of soil] on properties of test materials, B., 163.

Oesterlin, \dot{M} ., chemotherapy of germanin and arsinic acids. I., A., 111, 26. Chemotherapy of infectious diseases, A., III, 124, 433.

Oestermann, H. See Gerloff, U. Oesterreichisch Amerikanische Magnesit Akt.-Ges., refractory brick for lining rotary furnaces, (P.), B., 140. Casting of light metals and their alloys, (P.), B., 458. Producing hydrogen by converting carbon monoxide with steam, (P.), B., 668. Refining of magnesium or its alloys, (P.), B., 934. Building up of mortarless masonry of refractory bricks with spacing elements made from sheet metal, (P.), B., 1057. Electric shaft furnaces, (P.), B., 1074. Metallic magnesium, (P.), B., 1361.

Oesterreichische Dynamit Nobel Akt.-Ges., copper-zinc alloys, (P.), B., 1071. Treatment [roasting] of ores, fuels, etc.,

(P.), B., 1359.

Oesting, R. B., colorimetric assay of male hormones in urine, A., III, 418.

Oestreicher, T., metabolism of isolated fat-tissue. IV. Fat metabolism and hormones, A., III, 42.

Octringhaus, H. G. See under Grosse-Oetringhaus, H.

Oettel, F., possible developments in manufacture of sodium and magnesium, B., 450. Oettel, H., toxic action of quinol, A., III, 28. Action of organic liquids on the skin, A., III, 63.

See also Heubner, W.

Oettingen, W. F. von, halogenated hydrocarbons; toxicity dangers, A., III, 476. and potential

See also Wiley, F. H. Öy, E. See Lunde, G.

Officer, R., and Stewart, J. C., control of post-operative urinary retention with doryl, A., III, 478.

Offutt, J. S. See Roos, C. K. Oficialski, P., pharmacognosy of Spongia

fluviatilis, A., III, 167.

O'Flaherty, F. See Roddy, W. T.

Ofner, Alfred (Budapest), production of means for washing, emulsifying, moistening, and preventing formation of insoluble soaps, (P.), B., 1024.

Ofner, Alfred (Geneva), synthesis of anisyl

alcohol, A., II, 99.
Ogawa, K. See Shikata, M.,
Ogawa, M., glutathione. I. Correlation of glutathione content of arterial and venous blood of normal rabbits. II. Effect of ultra-violet irradiation on blood-glutathione, A., III, 84.

Ogawa, S., crystal structure of sputtered

nickel films, A., I, 448.

Ogawa, T., effect of inorganic salts on blood-sugar of rabbits, A., III, 195. Ogawa, Toru, Matsui, A., and Senoo, H.,

hydrogenation of Taiwan coals, B., 744. Ogden, J. W., economies of steam storage,

Ogg, R. A., jun., and Rice, O. K., factors influencing rates of reaction in solution, A., I, 248.

See also Jones, J. L.

Ogg, W. A., [zinc-smelting] furnace, (P.), B., 1227.

Oggioni, G., blood-sugar and glycæmic curve during Parkinson's disease, A., III, 462.

Ogilvie, J. See Nat. Aniline & Chem. Co. Ogilvie, L. See Walton, C. L.

Ogilvie, R. F., sugar tolerance in obese subjects, A., III, 462.

Ogino, Y. See Katori, S.

Oglanby, G. T., fire-extinguishing compound, (P.), B., 743.

Oglesby, \hat{E} . \hat{W} . See Tanner, F. W.

Ognew, M. M., corrosion of metals in contact with leather, B., 688.

Ogorodnikov, G. F. Seo Nikolaev, V. I. Ogston, A. G., dissociation constants, A., I, 81. Temperature coefficients of electrical conductivity of electrolytes in methyl and ethyl alcohols, A., I, 83. Mixtures of serum-albumin and -globulin,

Ogston, A. R., [ethyl] alcohol motor fuels on the British market, B., 752. Alcohol motor fuels, B., 1157.

Ogura, T. See Kafuku, K.

Ogura, Y. See Tamiya, H.

Oguri, S., and Yamaguchi, Tsuneta, photochemical reactions of cellulose. Effect of oxygen, B., 1319.

Ohara, H., application of stainless steel in dentistry, B., 919.
O'Hara, L. P., and Saunders, F., proteins.

VI. Solubility of nitrogenous constituents of seeds in sodium chloride solutions, A., III, 191.

O'Hara, P. H., and Hauck, H. M., storage of vitamin-C by normal adults following a period of low intake, A., III, 232.

Ohara, T., protein of purified Panicum crus-galli, L., var. frumentaeum, Hook f, A., III, 107.

Ohashi, F., β -specific receptors (homogeneous coagglutinins) in bacteria of the hog-cholera group, A., III, 414.

Ohashi, I., significance of liver in metabolism of lactic acid, A., III, 131.

Ohashi, R., Dubbs [oil-]cracking unit at Fushun, B., 204.

Ohdake. See under Odake.

Ohio Oil Co. See Slagter, A. J.

Ohkita, T., deproteinised rubber. I.—IV., B., 66.

Ohl, F., preparation of black lacquers with artificial resins, B., 63. Lithopone in white enamel manufacture, B., 466. Train [whale, fish] oils and paints etc., containing them, B., 810. Cycle finishes and finishing methods, B., 1088.

Ohl, O., synthetic detergents in practical washing, B., 585.

Ohle, Heinz, preparation of methyl d-gluco-

sonate, A., II, 483. Gross, W., and Wolter, A., fission of 2-hydroxy - 3 - tetrahydroxybutylquinoxalines. II., A., II, 521.

Ohle, Hertha. See Mahr, C.

Ohle, W., origin and improvement of Koog soils, B., 953. Colloid gels as nutrient regulators of streams, B., 1139.

Ohlmeyer, P., and Ochoa, S., rôle of manganese for the phosphate-transference function of cozymase, A., III,

See also Meyerhof, O.

Ohman, M. F. See Dow Chemical Co. Ohmart, L. M., [preparation of] tincture of cantharides, B., 1267.

Ohmori, Y., phosphomonoesterase, A., III, 483.

Ohta, M. See Hoshino, T.

Ohta, R., fermentable, hydrolysable sugar in blood and its micro-determination, A. III, 336.

Ohtsuki. See under Otsuki.

Oikawa, S., determination of oxalic acid in urine, A., III, 202. Daily excretion of oxalic acid in urine, A., III, 202.

Oishi, J., expansion and pressure coefficients of nitrogen, hydrogen, helium, and neon, and the absolute temperature of 0°, A., I, 354.

See also Kinoshita, M.

Ojala, V., and Schierz, E. R., Finnish chemists, A., I, 381.

Oka, S., behaviour of an ion cloud about a dipolar molecule under influence of an

alternating field, A., I, 387. Okabe, K., and Titani, T., heavy water content of atmospheric moisture, A., I, 203.

Okáč, A. Sec Dubský, J. V.

Okada, Y., occurrence of masses of gelatinous microbes in the soil, B., 1098.

Okahara, K. See Akabori, S., and Späth,

Okamoto, G., partition of deuterium between methyl alcohol and water, A., I, 298. Interchange equilibrium of deuterium; partition between water and hydroxyl group; number of interchangeable hydrogen atoms in complex salts, A., I, 348.

See also Horiuti, J., Mizushima, S., and Tominaga, H.

Okamoto, I., nickel alloys in food-processing equipment, B., 1220.

Okamura, I. See Kondô, M.
Okamura, Z. See Ueno, Sei-ichi.
O'Kane, W. C., [insect-repellent] emulsion, B., 604

See also Nikitin, A. A. Okatov, A. P., and Levina, Z. I., mechanism of desorption of solvent vapours from activated charcoal. II. Sorption of water vapour by silica gel and activated charcoal at temperatures above 100°,

Okaya, I., movement of fluid parallel to the axis of a solid cylinder, and the Liese-

gang phenomenon, A., I, 458. Okazawa, T. See Nihon Denki Kogyo

Kabushiki Kaisha.

Oke, B. Y., lattice theory of alkaline-earth carbonates. II. Elasticity constants of aragonite. III. Lattice energy of the crystals of calcite and its thermochemical applications. IV. Elasticity constants of calcite, A., I, 67, 228, 349.

O'Kelly, A. A., Smith, Watt, and Wilson,

R. C., jun., nutritive protein of some newly developed soya beans, A., III, 128.

Oketani, S. See Trillat, J. J.

Okey, R., Gillum, H. L., and Godfrey, L. S., effect of cholesterol feeding on growth of rats, A., III, 46.

and Yokela, E., effect of feeding egg-yolk on liver-lipins of young rats, A., III,

See also Gillum, H. L.

Okida, I. See Yamazaki, T.

Oknov, M. G., solubility of high-melting metals, B., 50.

Oknowski, L. Sec Welter, G.

Okonite-Callender Cable Co., Inc., insulated electric-cable conductors, (P.), B., 361. Oks, R. S. See Kazarnovski, S. N.

Okubo, J., and Takagi, M., effect of stretching and twisting on discontinuous process of magnetisation in nickel, iron, and nickel-iron alloys, A., I, 173.

Okuda, H., nickel and its alloys in the brewing industry, B., 1221.

Okuda, Y., and Katai, K., cystine content of hair and feathers, A., III, 87. Canned meats. II. Gases and metals in storage cans. III. Production of carbon dioxide and hydrogen during canning and storage, B., 281. Okumura, N. See Naka, S.

Okun, M. I., phosphatide content of brain of hibernating animals in various functional states, A., III, 339. Okun, Z. M. See Ferdmann, D.

Okunev, N., treatment of tumours by hydrogen iontophoresis, A., III, 12.

Okuno, H. See Uzumasa, Y. Okunuki, K., gaseous metabolism of pollen, A., III, 366.

See also Mori, T'.

Olbrich, S., stability of absorbed immune sera for M-N-diagnosis of blood groups, A., III, 294.

Olcott, H. S., monoacetates of quinol and pyrocatechol, A., II, 145.

and Emerson, O. H., antioxidants and autoxidation of fats. IX. Antioxidant properties of the tocopherols, B., 937.

and Mattill, H.A., vitamin-E and growth, A., III, 497. Antioxidants and autoxidation of fats. VII. Classification of inhibitors, B., 57.

See also Hamilton, L. A.

Olcott, L. E. See Greenup, H. W.

Oldenberg, O., absorption spectrum as a test for free radicals, A., I, 215.

See also Frost, A. A. Oldershaw, A. W., untreated and inexpensive materials as a source of lime [for

soils], B., 1383.

Oldielt, C. O., distribution of glucose in human blood and glycolysis in preparation of protein-free filtrates by Folin's method with non-hæmolysed blood, A.,

Oldham, E. W., and Harrison, J. G., jun., determination of free carbon in rubber goods, B., 949.

Oldham, F. D. See MacIntire, W. H.

Oldham & Son, Ltd., and Holt, H., jun., detecting electrically the presence of gas or firedamp in mines and other places, (P.), B., 583.

Oldright, G. L., Miller, V., Sieg, H., Keck, W. E., and Shelton, F. K., recovery of potash from tailing of a porphyry copper

property, B., 1043.
Olds, G. D. P., [cultivation of] pineapples,

O'Leary, J. J., and Atmospheric Nitrogen Corp., synthesis of compounds [e.g., ammonia], (P.), B., 778.

O'Leary, K., and Guterman, C. E. F., Penicillium rot of lily bulbs and its control by calcium hypochlorite, B., 959. O'Leary, M. J. See Shaw, M. B.

Oleinikova, E. J. See Stacheeva-Kaverzneva, E. D.

Oleothesin Co., Inc. See Stover, O. H. Olesehtschuk, O. N. See Kaschtanov, L. I.

Olesk, J. See Barkan, G.

Olier, A., and Soc. Anon. des Établ. A. Olier, apparatus for countercurrent extraction, (P.), B., 995.

Olin, H. L., composition and use of Iowa coals. I.—IV., B., 998, 1291. and Petersen, H. W., use of bentonite as

a coagulant in water treatment, B., 848.

Olin, J. F., and Sharples Solvents Corp., alkylolamines, (P.), B., 526.

Olitsky, P. K., and Sabin, A. B., comparative effectiveness of chemical sprays in protecting monkeys against nasally instilled poliomyelitis virus, A., III, 419.

See also Bauer, J. H.Oliva, V. See Grau, C. A.

Olivari, L. See Romani, B. Olive, T. R., enamel frit manufacture improved by continuous smelting, B., 24Ō.

Oliveiro, C. J. See Rosedale, J. L.

Oliver, F.J., spectrographic determinations on east iron, B., 1348.

Oliver, H. E., use and maintenance of refractories [in carbonising industries], B., 241.

Oliver United Filters, Inc. See Flynn, E. D. Oliveri-Mandalà, E., and Indovina, R., influence of deuterium oxide on catalytic decomposition of hydrogen peroxide with colloidal solutions of platinum, A., I, 368.

and Irrera, L., constitution of cyanogen halides, A., I, 222.

Oliverio, A., and Belflori, O., decomposition of water by metals and metallic couples, A., I, 527.

Olivier, S. C. J., hydrolysis of alkyl halides. II., A., I, 249.

[with Bosman, (Mlle.) M., and Bouwman, (Mlle.) M. K.], hydrolysis of alkyl halides. I., A., II, 1.

and Wit, J., 1-naphthylacetic acid, A., II, 418.

Olivier, V., determination of ash in cane molasses, B., 1111.

Olivier-Pallud, P., and Glomaud, G., postpartum urinary elimination of aminoand amino-ammoniaeal nitrogen, A., III,

Ollard, E. A., rectification of faulty acid copper [electroplating] solutions, B., 683. Black chromium, B., 685.

Ollero, A. See Rodríguez Velaseo, J. Ollivier, H., comparison between the laws for thermal variation of magnetic rotatory power for manganese and gadolinium nitrates and for cerium, neodymium, and praeseodymium nitrates, A., I, 348.

Olmer, F., photographic recording of reduction of iron oxides in presence of their natural impurities, A., $\hat{\mathbf{I}}$, 373. Olmer, J. See Roche, J.

Olmstead, L. B., moisture relation of soils from erosion experiment stations, B., 1248. Moisture relations of soils from the erosion experiment stations, B., 1382. Olmstead, R. L. See Theophilus, D. R. Olmsted, W. H. See Williams, R. D.

Olpin, H. C. See Brit. Celanese. Olsen, A. G. See Gen. Foods Corp.

Olsen, A. L., and Washburn, E. R., vapour pressure of binary solutions of isopropyl alcohol and benzene at 25°, A., I, 295. Olsen, C., applicability of the Kieldahl

process to determination of nitrogen in biological material, A., III, 328. See also Hevesy, G. von.

Olsen, F., Seavey, F. R., and Western Cartridge Co., nitrosoguanidine as a priming ingredient, (P.), B., 1412.

Tibbits, G. C., Kerone, E. B. W., and

Western Cartridge Co., smokeless powders, (P.), B., 91.

and Western Cartridge Co., propellent powder, (P.), B., 190.

Olsen, H., apparatus for electrolytically decomposing water or other liquids under pressure, (P.), B., 803.

Olsen, J. C., and Maisner, H., vanadium catalysts; performance and poisoning by arsenic in sulphuric acid manufacture, B., 435.

Olsen, L. O., optical excitation of HgH and CN bands, A., I, 164.

Olson, A. R., Porter, C. W., Long, F. A., and Halford, R. S., rearrangement of N-chloroacctanilide in presence of radioactive hydrochloric acid, A., I,

See also Long, F. A.

Olson, C. M., and Pierce, W. C., vacuum spectrograph for X-rays, A., I, 378. See also Pierce, W. C.

Olson, E., and Meloche, V. W., oxidation of selenium in the glow discharge. II. Study of variables and characterisation of product. III. Striated deposits and

possible mechanism, A., I, 91.
Olson, F. R., Peterson, W. H. and
Sherrard, E. C., effect of lignin on fermentation of cellulosic materials, B., 1186.

Olson, F. V. See Griswold, E. Olson, H. C. See Shepard, S.

Olson, J. E., and Celon Co., [ornamental] hydrated article, (P.), B., 536.

Olson, R. E., and Taylor Instrument Companies, heat-exchange system, (P.), B., 3. Olson, T. M., variations in calcium and

phosphorus contents of cow's milk during the lactation period, A., III, 457. Is vitamin-D present in butter fat? B., 1399.

Totman, C. C., and Wallis, G. C., effect of tankage on flavour of milk, B., 1121. Olson, V. R., and Feldman, H. B., quantitative acetylation of amines by acetyl chloride and pyridine, A., II, 530.

Olsson, E., so-called pressure effect in the spectra of hydrides, A., I, 164. Induced predissociation of the tellurium molecule submitted to intense magnetic fields, A., 1, 336.

Olszycka, L., determination of small amounts of chloral in biological substances, A., III, 334.

O'Malley, G. B., recent developments in rock-drill steel, B., 680.

O'Mara, R. F. See Colby, H. S.

O'Meara, R. A. Q. See Colebrook, L. Omer, G. C., jun., and Lawson, J. L., constancy of wave-length of a spectral line, A., I, 158.

Omer, (Miss) R. E., and Hamilton, C. S., arsinated derivatives of mixed ketones, A., II, 267.

Omnichrome Corporation, photographic sensitive material of monopack type adapted for colour photography, (P.), B., 983.

See also Fraunhofer, H. von, and Friedman, J. S.

Omnicolor, Ltd. See Bernardi, Anthony. Omohundro, A. L. See Fanto, E. C. Ondracek, K., separation of crystals in cell sap of Desmidiaceæ, A., III, 499. O'Neil, W. F. See Finefrock, T. P.

O'Neill, H., alloy and fine-grained steels for locomotive coupling rods, B., 792. and Pearce, J. G., foundry and laboratory characteristics of cupola cokes, B., 861.

Oneto, J. F. See Blicke, F. F. Ongsansoy, E. K. Sce Teodoro, A. L.

Onischtschenko, A. S., action of nitrous anhydride on santene, A., II, 330. Action of N_2O_3 on $\Delta^{1:3}$ -cyclohexadiene, A., II, 489.

Onishi, M. See Hachihama, Y. Ono, Kashichi, and Imoto, M., decomposition of phenolic ethers. IV. Decomposition of piperonylic acid with calcium oxide or barium hydroxide. V. Decomposition of the methylenedioxygroup with oxygen; oxidation of the propyl group with oxygen in the liquid phase. VI. Scission of the methylenedioxy-group of dihydrosafrole, A., II, 15. Oxidation of hydroxyacetophenone, A., II, 23. Preparation of thymol from m-cresol. IV. Actions of phosphoric acid, zinc chloride, and acetic acidsulphuric acid on m-tolyl isopropyl ether. V. Action of phosphoric acid, zinc chloride, and the Niederl reagent on thymol isopropyl ether. VI. Action of phosphoric acid and of zinc chloride on m-tolyl isopropyl ether in presence of isopropyl alcohol. VII. Decomposition of isopropyl others of m-cresol and its homologues by Grignard reagents, A.,

II, 58, 336. Ono, Kazuki, yeast amylase. IV. Properties; optimum p_{Π} and temperature, A., III, 269.

Ono, Masami, various admixtures of Portland cement. I. Absorptive power of lime by the dried admixtures at 105°, B., 140. Ono, Minoru. See Takci, S.

Ono, S., photographic action of sputtered

platinum films, A., I, 574.

Ono, Y. Sco Umeda, K.
Onoe, T., biochemistry of carbohydrates.
XVI. Vitellomucoid. XVII. Mucoid of egg-white and -yolk of developing chicks, A., III, 87.

Onondaga Pottery Co. See Parmelee, C. H.

Onsdorff, T. See Fellers, C. R. Onslow, D. V., creep and corrosion of steels for use at high temperatures, B., 245.

Onstott, R. H. See Sebrell, W. H.

Oord, A. van der, bricks, blocks, etc., (P.), B., 1057.

Oosaka, H., cryoscopic studies on transition points of compounds of organic solvents with salts. III. Congruent m.p. of alcoholates of alkali halides, A., I, 409.

Oosterhoff, L. J. See Hermans, J. J. Oosterman, J. See Kruyt, H. R. Oosthuizen, K. See Clay, J.

Opaljar, K. See Kizel, A. Oparin, A. I., storage of sugar in roots of beet; significance of invertase, A., III, 238. Synthetic and hydrolytic actions of invertase in living plants, A., 111, 430.

and Schapiro, E. O., transformation of carbohydrates during storage and secondary sprouting of sugar boetroots, B., 482.

Oparina, M. P., pyridine-2-acetic acid, A., II, 429.

Opechowski, W., exchange interaction in magnetic crystals, A., I, 227. Broadening of absorption lines of iodine vapour by foreign gases, A., I, 385. Temporature dependence of magnetisation of a ferromagnetic material at low temperatures, A., I, 504.

Openshaw, H. I., and Robinson, R., strychnine and brucino. XXXVI. Prelimin-

ary synthetical experiments, A., II, 355. Opichtina, M. A., and Frost, O. I., viscosity and b.p. of aqueous solutions of HCN, A., 1, 232.

Opie, C. M., atmospheric pollution, B., 396. Opitz, H., machinability of light metals, particularly alloys for automatic machines, B., 797.

Opitz, J., preparation of bast fibres for spinning, (P.), B., 1190.

Opitz, K., Kathsack, K., and Morgenroth, E., significance of nutrient ratios in manuring with mineral fertilisers, B., 1102.

Opotzki, V. F., and Dranovski, A. B., catalytic synthesis of diethylamine, A., II, 137.

and Spivak, F. G., preparation of zinc phenolsulphonate, B., 523.

Tiulpina, A. F., and Leiderman, C. A., preparation of iron by reduction with hydrogen, B., 142.

Oppel, I., hydrocyanic acid content of linseed, B., 1233.

Oppelt, F. See Brass, K. Oppenauer, R. V., dehydrogenation of secondary alcohols to ketones. I. Preparation of sterol-ketones and sexual hormones, A., II, 250.

Oppenheim, R., and Soc. Anon. Le Carbone, alkali primary cell with depolarisation by

air, (P.), B., 694.

Oppenheimer, J. R. See Carlson, J. F., Kalckar, F., and Nordheim, G.

Oppermann, T., and Trautmann, A., influence of feeding hay from acid soils on blood and milk composition of sheep, B., 1403.

Oprean, R. See Benetato, G., and Nitzescu, I. I.

Opryshek, J. Sco Standard Oil Development Co.

Opticolor Akt.-Ges., taking of photographic pictures on lenticular element films, (P.), B., 501.

Oramold Products Corporation, dental impression and moulding material, (P.), B., 1240.

Oravec, E. Seo Dubský, J. V. Orchard, O. B., control of rose mildew, B., 1106. Millipede control (Blanjulus guttulatus, Bosc., and Orthomorpha gracilis, Roch.), B., 1107.

and Read, W. H., rose thrips (Thrips fuscipennis, Hal.), B., 1106.

Orcutt, F. S., nitrogen metabolism of sova beans in relation to the symbiotic nitrogen-fixation process, B., 1386.

and Seevers, M. H., solubility coefficients of cyclopropane for water, oils, and human blood, A., I, 178. Determination of solubility of gases in pure liquids or solutions by the Van Slyke-Neill manometric apparatus, A., I, 202.

and Waters, R. M., determination of cyclopropane, ethylene, and nitrous oxido in blood with the Van Slyke-Neill manometric apparatus, A., III,

and Wilson, P. W., nitrogen metabolism in plants, A., III, 237.

See also Umbreit, W. IV.

Ord, J. A. See Leberknight, C. E.
Ordinskaja, E. S., Petin, N. N., and
Chigerovitsch, M. I., kinetics of
carbonisation of lime-sand autoclave materials, B., 507. See also Nemkova, O. G.

Ordinski, S. I., properties of digitalis preparations, B., 839.
Orechov, D. A. See Krasnikov, A. I.
Orekhov, A. P., recent work in alkaloid

chemistry, A., II, 265.

and Konovalova, R. A., alkaloids of Convolvulus pseudocanthabricus, A., II,

and Norkina, S. S., alkaloids of Arundo donax, A., II, 311. Alkaloids of Cytisus caucasicus, A., II, 311. and Proskurnina, N. F., alkaloids of Salsola richteri, A., II, 265.

See also Konovalova, L., Menschikov, G., Norkina, S. S., Proskurnina, N. F., and Späth, E.

Orelli, E. von, froth-flotation device. (P.), B., 250.

Orelup, J. W., acetylation of diphenolisatin, (P.), B., 529.

Orenstein & Koppel Akt.-Ges., gas gener-

ators, (P.), B., 13. Oreschko, V. F. Sce Pantschenkov, G. M. Orestano, G., methæmoglobin formation during poisoning by glyceryl trinitrate, A., III, 28.

and Abbate, M., elimination of arsenic as a function of the dose. I. Inorganic

compounds, A., III, 29. Orestov, I. L., behaviour of electrodes in solutions of foreign ions, A., I, 364.

Orfield, H. M. See Beebe, R. A. Orinick, M. T. See Zerbey, M. E. Orla-Jensen, A. D. See Orla-Jensen, S.

Orla-Jensen, S., micro-organisms and vitamins, A., III, 396.

Orla-Jensen, A. D., and Winther, O., Bacterium bifidum and Thermobacterium

intestinale, A., III, 273. Orlenko, A. F., and Fessenko, N. G., application of picric acid in qualitative microanalysis, A., I, 97. Use of picric microchemical

acid in qualitative analysis, A., I, 148. Orletz, P. I., fusion test for quality of tool steel, B., 446.

Orlov, I., and Kaganova, T., determination of iodine in extracts from brine, B., 778. and Ksenofontova, T., determination of halogens in [medicinal] extracts, B., 840. See also Postnikov, N. N.

Orlov, N. A., abiogenetic synthesis of carbohydrates, B., 107.

and Mustafin, L. S., oxidation as a route to carbohydrates, A., II, 444.

and Radtschenko, O. A., chemical study of the organic mass present in kukkersite [shale], B., 10.

and Shaligin, A. T., formation of carbohydrates by self-oxidation of hydrocarbons, A., II, 229.

and Tarasenkova, E. M., carbohydrate theory of origin of petroleum. Conversion of acetaldehyde into hydrocarbons, A., II, 50.

and Uspenski, V. A., geochemistry of caustobiolites, A., I, 430.

Orlov, N. N., and Florova, T. I., dyes from furfuraldehyde. I. Synthesis of analogues of malachite-green, benzoflavin, and rosamine, B., 329.

and Vaisfeld, P. G., reversibility of the Friedel-Crafts reaction, A., II, 330.

Orlov, S. M., structure of the trimeride of ψ-butylenc, A., II, 316. Orlov, V. I. See Levi, P. I. Orlova, I. M. See Adadurov, I. E., and

Nikitin, N. I.
Orlova, K. See Osnos, I.
Orlowski, W. See Jablezyński, K.

Ormond, J. I. See Johnson, J. J.Ormont, B., maximum valency of elements and atomic structure. VIII. Maximum valencies of elements in compounds and the m.p. of simple substances. IX. Physical properties and reactivity of molecules in the co-ordination sphere. X. Chemical linkages in complex ammoniates, A., I, 14, 66,

See also Petrov, B.

Ornstein, I., Dragos, M., and Muhlberg, S., rôle of cholesterol and lecithin in the mechanism of the Bordet-Wassermann reaction, A., III, 125.

See also Cernateseu, R., and Parhon, C. I. Ornstein, L. S., scattering of neutrons in matter. II.-V., A., I, 5, 58, 107, 389.

and Haringhuizen, P. J., optical research

of thin [metal] layers, A., I, 256. and Schouten, J. F., age and rate of decrease of red blood-cells before and after liver treatment of pernicious anemia, A., III, 58. Rôle of electrical, photo-chemical, and diffusion processes in vision, A., III, 307.

and Uhlenbeck, G. E., motion of neutrons through paraffin, A., I, 389.

See also Baars, B., and Burger, H. C. Orowan, E., temperature variation of crystal plasticity, A., I, 19. Orr, J. H. Sec Boyd, E. M.

Orr, W. J. C., and Butler, J. A. V., kinetic and thermodynamic activity of protons and deuterons in water-deuterium oxide mixtures, A., I, 184.

Orrú, A., behaviour of electrical conductivity of ovalbumin with change in temperature, A., I, 134.

Ort, J. M., and Christiansen, W. G., colour

of morphine sulphate, B., 840.

Orten, J. M., and Smith, A. H., certain metabolites and related compounds as precursors of endogenous citric acid, A., III, 131. Site of formation of citric acid in the animal body, A., III, 422.

Smith, A. H., and Mendel, L. B., relation of calcium and iron to the erythrocyte and hamoglobin content of blood of rats consuming a mineral-deficient ration, A., III, 204.

See also Smith, A. H.

Orth, O. S. See Burge, W. E.

Orth, P., solubility of sucrose in pure water, B., 1393.

Orthmann, A. C., chemistry in chrome tanning, B., 1380.

 \neg Surak, J. G., and Koch, J. R., gelatin as substrate for measuring enzyme activity of commercial bating preparations, B., 267.

Ortin, M., volatilisation of barite sulphur during agglomeration of iron ores, B.,

Ortmann, H. See Riehl, N.

Ortner, G. See Strebinger, R.

Orzechowski, G., action of calcium on the

isolated frog's heart, A., III, 263.
Os, D. van, bile acids, sterols, neutral saponins, cardiac poisons, hormones, and vitamins and their mutual chemical relationships, A., II, 455.

Osada, G., effect of endocrine glands on composition of skeletal muscle. IV. Effect of the testis. V. Effect of the ovary, A., III, 186.

Osada, K. See Nihon Denki Kogyo Kabushiki Kaisha.

Osada, S., effect of internal secretory organs on composition of skeletal muscle. I. Effect of thyroid gland, A., III, 42. Effect of pituitrin on composition of skeletal muscle, A., III, 185.

Osame, G., manufacture of sulphuric acid by vanadium catalyst in intermediate stage, B., 1042. Fillers for a sulphuric acid tower. I., B., 1333.
Osanov, B. P., and Sizova, A. G., com-

position of flax chaff, B., 534.

Osato, S., immunochemistry of tuber-culosis, A., III, 463.

Osborn, E. F. See Behre, C. H., jun. Osborn, R. A. See Mathews, J. A. Osborn, W. O., Rohrman, F., and Zech, J. D., placing extra necks on roundbottom flasks, A., I, 380.

Osborne, F. H., and Dexter & Sons, C. H., porous, long-fibred, non-hydrated paper, (P.), B., 1324.

Osborne, N. F., Stimson, H. F., and Ginnings, D. G., calorimetric determination of the thermodynamic properties of saturated water in liquid and gaseous states from 100° to 374° C., A., I, 353.

Osborne, R. L., sympatheticomimicity. III. Physiological effects of more nonamino catechol derivatives, A., III, 177. Osborne, S. G., and Hooker Electrochem.

Co., impregnation [weighting] of textile

fabrics, (P.), B., 32.
Rowland, J. M., and Hooker Electrochem. Co., reacting chlorine with metal-bearing solids, (P.), B., 36.

Osburn, J. M. See Burckhalter, R. N. Osburn, O. L. See Brown, Russell W.

Osella, L. See Contardi, A. Osenova, T. See Rabinovitsch, A. Osetrova, E. D. See Tschelincev, G. V. Osgood, E. E., and Brownlee, I. E.,

culture of human marrow, A., III, 334. Osgood, F. D. See Ellis, R. W. Osgood, G. H., and Peterson, R. G.,

adhesives, (P.), B., 1382.
Osgood, H. See Hubbard, R. S.
Oshima, K., and Sugawara, T., cause of decrease of ether extract in fish meal during storage, B., 282.

Oshima, Y., tea leaves. III. Constitution of tannin in leaves, A., III, 246.

and Hayashi, K., tea leaves. IV. Enzyme chemistry of manufacture of black tea, A., III, 246. Sec also Yamamoto, R.

Osipenko, F., and Lipkina, E., phenol-furfuraldehyde synthetic tanning products from peat tar. XIII., B., 817.

Osipov, S. S. See Strachov, N. M. Osipov, V. N., oxidation of phosphorus in presence of charcoal, A., I, 37.

and Titova, A. S., preparation and properties of certain lower phosphoric acids. III. Magnesium hypophosphate, A., I, 146.
Osipov-King, V. A., polarisation prisms,

A., 1, 99.

Osipova, O., decaldehyde, A., II, 228. Oskerko, A., synthesis of azido-derivatives of acetylenic hydrocarbons; synthesis of CH;C [CH₂]₃·CH₂·N₃, A., II, 54. Preparation of halogenoalkines with the triple linking as far as possible from the halogen atom; synthesis of dehydroundecylenyl alcohol $[\Delta^a$ -undecimen- λ -ol] and dehydroundecylenyl bromide $[\lambda$ -bromo- Δ^a undecinene], A., II, 82. Hydrazides of higher unsaturated acids. II. Hydrazide of dehydroundecenoic acid, and its derivatives, A., II, 180.

Osmo, Société à responsabilité limité, continuous and intimate mixture of liquids and gases under pressure, (P.), B., 995.

Osmond, D. A., survey of soils of the Long Ashton Research Station farm, B., 1095.

Osmose Holzimpraegnierung Ges.m.b.H., preservation of wood, (P.), B., 577.
Osnos, I., Golovistikov, I., and Orlova, K., preparation of linseed oil for lacquers, B., 1079.

Osnos, M., and Telefunken Ges. f. Drahtl. Telegraphie m.b.H., temperature-regulating system, (P.), B., 990.

Osokin, A. S., preparation of artificial gasoline from unsaturated gases by vapour-phase cracking, B., 108.

Osokoreva, N. A., carbonisation of dolomites; magnesia alba from dolomites, B., 132.

Sce also Fleischer, N. A. Osol, A., and Tice, L. F., test for heavy metals in magnesia magma, B., 728.

Osolin, K. M., and Onstinov, N. A., [pine-tree] tapping trials in U.S.S.R. I., B., 368.

Osselaer, A. van. See Martens, M. Osswald, E. See Cornelius, H. Ost, K. See Vorländer, D.

Ostapenko, I. G. See Gortikov, V. M. Osten Chemical Corporation. See Krassny,

Osterberg, H., electroresistive effect, and a rectifying property of carborundum

crystals, A., J, 114. and Cookson, J. W., piczodielectric effect and electrostriction in anisotropic or isotropic media, A., I, 449.

Ostergaard, P., and Gulf Oil Corp. of Pennsylvania, tube still or heater, etc., (P.), B., 19.

Osterhout, W. J. V., electrochemical methods in study of plant cells, A., III, 234. Changes of apparent ionic mobilities in protoplasm. II. Action of guaiacol as affected by $p_{\rm H}$, A., III, 328. Protoplasmic surface in plant cells, A., 111, 407.

Ostermann, F., hollander knives of aluminium bronze, B., 570.

Ostermann, W., Höfinghoff, W., Kumichel, W., and Amer. Bemberg Corp., production of cuprammonium silk by stretch-spinning process, (P.), B., 895. Ostermayer, II. See Braun, J. von, and

Hahn, G.

Ostern, P., and Gnthke, J. A., production of phosphoglyceric acid, A., III, 395. Guthke, J.A., and Umschweif, B., enzymio phosphorylation of starch, A., III, 430.

Osterstrom, R. C., and Pure Oil Co., polymerisation of hydrocarbon oils, (P.), B., 1305. Polymerisation of unsaturated hydrocarbons, (P.), B., 1305. Ostrikov, M. S. See Dumanski, A. V.

Ostro Research Laboratories, Inc. See Ostromislensky, I. I., and Semenoff, S. Ostrogovich, A., and Crasn, V., y-triazines.
XXXIII. New compounds obtained from dihydroxytriazinylformaldoxime,

A., II, 121.

and Ostrogovich, G., sodium cupricyanurate: two differently coloured forms of the anhydrous salt; new specific reaction of cyanuric acid, A., I, 256. Catalytic reductions in the y-triazine group. I. Conversion of dihydroxymethyltriazine into the "trigenie acid" of Liebig and Wöhler, A., II, 121.

Ostrogovich, A., and Tanislau, I., y-triazines. XXXIV. Dihydroxytriazinyl phenyl ketoxime and its salts. XXXV. Beckmann transformation of dihydroxytriazinyl phenyl ketoxime, A., II, 121.

Ostrogovich, G. See Ostrogovich, A. Ostromislensky, I. I., and Ostro Res. Labs., therapeutics for killing bacteria, (P.), B., 620.

Tolstoouhov, A. V., and Ostro Res. Labs., purified p-aminophenols, (P.), B., 420

See also Medico Chem. Corp. of America.

Ostroshinskaja, G. See Kanter, D. Ostroumov, B. V., the Gedroiz potassium method for mass analyses of absorption capacity of carbonate soils, B.,

Ostroumov, E. A., separation of uranium, zirconium, and titanium from manganese, cobalt, and nickel by means of pyridine, A., I, 329. Separation of zinc from cobalt, nickel, and manganese by means of hydrogen sulphide, and final precipitation of zinc with anthranilic acid. I. and II., A., I, 426, 476.

See also Tscherviakov, N. I.

Ostroumov, N. M. See Ipatiev, V. V., jun., and Schalberov, N. A.

Ostrovski, A. I., and Drevol, Z. I., discoloration of macaroni during manufacture, B., 487.
Ostwald, Walter, control of combustion

in the internal-combustion engine, B., 868.

Ostwald, Wolfgang, electrolyte coagulation of weakly solvated sols and electrolyte activity. IX. Theory of Burton's rule, A., I, 564. Foam and foaming analysis, B., 1143.

and Hoffmann, K., electrolyte coagulation of weakly solvated sols and electrolyte activity. VIII. Ion antagonism in flocculation, A., I, 515.

Kokoros, H., and Hoffmann, K., electrolyte coagulation of weakly solvated sols and electrolyte activity. V. Influence of temperature. X. Influence of non-electrolytes, A., I, 410, 614.

and Siehr, A., foaming analysis. II., A., I, 332.

and Stuart, W. W., mechanically labile and stable structure viscosity in gelatin sols, A., I, 240. Influence of salts on viscosity of gelatin solutions and rôle of activity coefficient, A., I,

Oszacki, A., and Kurzweil, R., alkalosis of blood in neoplasms and its diagnostic and pathogenetic importance, A., III,

Ota, A., influence of quinine hydrochloride on iodine contents of endocrine organs and blood of thyroidectomised rabbits, A., III, 137.

Ota, S. See Yamazaki, K. Otani, M. See Nishida, K.

304.

Othmer, D. F., vapour re-use process; separation of mixtures of volatile liquids, B., 96. Concentration acetic acid, (P.), B., 213.

and Tennessee Eastman Corp., dehydration of acetic acid and other lower fatty acids, (P.), B., 1021.

See also Eastman Kodak Co.

Otin, C., and Dima, M., cracking of Rumanian kerosene, B., 516.

and Huidovici, G., vacuum [vegetable] tanning, B., 1094.

Otis, A. N. See Gen. Electric Co.

Otis, L. See Smith, Margaret C.

Otis, R. M. See Fowler, A. A. O'Toole, E., treating coal, ore, grain, and similar materials, (P.), B., 1008.

Otsuka, H., vapour-phase cracking. V. Cracking of gas oils containing or not containing aromatic components, B., 108. Catalytic polymerisation of eracked-gas components at atmospheric pressure, B., 750.

Otsuki, H., citronellal-terpene. I. Exist-

ence of a new terpene, $C_{10}H_{16}$, A., II, 200. Otsuki, T., "cremastramannan," the mannan of Japanese saleps, A., II, 446. Bletillamannan, a mannan from the tubers of Bletilla striata, A., II, 446. Ott, C. J. See Shell Development Co.

Ott, Emil. See Hercules Powder Co.

Ott, Erwin, and Weissenburger, H., simple compounds of cyanogen. IV. Dibromomalononitrile and its conversion into sodioazidomalononitrile and a bimolecular cyanoazide, C2N8, A., II,

See also Glemser, O. Ott, G. II. See Schwarzenbach, G.

Ott, H. See Brand, K.
Ott, K. See Du Pont de Nemours & Co.,
E. I.

Ott, M., vitamin-C and carotene content of field and garden crops with different fertilisation, B., 271.

Ott, T. F. See Union Oil Co. of California. Ottawa, H. See Hahn, A., and Wieland,

Otten, F. G., determination of the alkaloid content of Secale cornutum, B., 729.

Ottensooser, F., and Tobler, W., formation of normal antibodies; different grades of isoagglutinins with uniovular triplets, A., III, 197.

Ottersbach, C. A., unfused ground enamels,

Otting, H. E., and M. & R. Dietetic Labs., treatment of milk products, (P.), B.,

Otto, C., regenerator with chequer work for vertical flow of gaseous media, (P.), B.,

Otto, G., [ionic] dissociation of new types of synthetic tanning agents compared with

natural [vegetable] tannins, B., 1380. Otto, J., physical properties of technical gases, B., 201.
Otto, M. M., electric moments of dioxans

and dioxolans, A., I. 551.

Otto & Co., G.m.b.H., C., discontinuous operation of horizontal coke ovens, (P.),

Otvagin, N. N., stability of sulphur dioxide-lubricating oil solutions, B., 95. Liquid sulphur dioxide for automatic refrigerators, B., 906.

Ou, C. W., and Yu, P. Y., manufacture of noodles from green beans, B., 1401.

Oubridge, W. A., case-hardening of centrifugal [ferrous] castings, (P.), B., 1225. Ouchi, I. See Toraishi, S.

Oudin, pedological and chartographic classification of French soils, B., 1382.

Oudman, J. See Arisz, W. H. Ouellet, C. See King, T.

Ourisson, J., calcium hypochlorite, B., 1044. Oury, A., modification of effect of acetylcholine on right auricle of the tortoise

as a function of p_H , A., III, 477. Oustinov, N. A. See Osolin, K. M. Outhier, V. See Balyeat, R. M.

Outhouse, E. L., aminoethyl phosphoric ester: a compound apparently specific to malignant tumours, A., III, 379.

Outhouse, J., and Krouse, R., lysine deficiency results in poor use of protein, A., IIĬ, 468.

and Smith, J., superiority of lactose over other carbohydrates [in nutrition of

other carbonyatrees [in mutation of rats], A., III, 470.

Outridge, L. E. See Bone, W. A.

Oven, E. von. See Socker, H.

Ovenston, T. C. J., and Terrey, H., heats of formation and solution of isomeric cobaltammines, A., I, 83.

Overbaugh, S. C. See Allen, C. F. H. Overbaugh, W. V. See Texas Co. Overbeek, J. van, growth-substance curvatures of Avena in light and dark, A., Ill, 81. Effect of the roots on the production of auxin by the coleoptile, A., Ill, 329.

Overhoff, J., structure of proteins, A., II, 172.

Overholser, E. L., and Claypool, L. L., response of D'Anjou pears to fertilisers in central Washington, B., 600.

and Overley, F. L., effect of spraying apple leaves with certain less-used materials on their carbon dioxide intake, B., 171.

See also Batchelder, E. L., and Overley, F, L.

Overholser, M. D. See Nelson, W. O. Overley, F. L., and Overholser, E. L., spray-

residue removal, B., 182.
See also Groves, K., Marshall, R. E., and Overholser, E. L.

Overman, O. R., keeping quality of butter, B., 388.

and Garrett, O. F., determination of sodium; removal of phosphorus before determining sodium by the uranyl zinc

acetate method, A., 1, 198.

Overstreet, R., and Giauque, W. F., ammonia; heat capacity and vapour pressure of solid and liquid; heat of vaporisation; entropy values from thermal and spectroscopic data, A., I, 175.

Ovetschnikov, T. V., economic basis for underground gasification of coal by the Shuravlev method, B., 639.

Ovregard, O., asphaltic or bituminous emulsions, (P.), B., 874.

Ovtschinnikova, J., removal of ammonia from water by filtration through zeolites, B., 625.

Owen, E. A., and Jones, J. I., effect of pressure and temperature on occlusion of hydrogen by palladium, A., I, 560. Palladium-hydrogen system, A., 1, 560.

and Yates, E. L., X-ray investigation of pure iron-nickel alloys. I. Thermal expansion of alloys rich in nickel. II. Thermal expansion of some further alloys. III. Thermal expansion of alloys rich in iron, A., I, 127, 232, 356. and Yates, E. L. [with Sully, A. H.],

X-ray investigation of pure iron-nickel alloys. IV. Variation of the lattice parameter with composition. V. Variation of thermal expansion with composition, A., I, 356.

Owen, G. W., effect on refining results of mixing expeller and hydraulic cottonseed oil, B., 939.

Owen, J. R., and Sherman, A., calculation of the activation energy of the re-arrangement of ergosterol to calciferol, A., I, 314.

Owen, O., mushroom compost, B., 1104. Owen, W. L., blackstrap molasses as raw material for biochemical industries; [production of butyric, acetic, and lactic acids], B., 1111.

Owen, W. O., controlled atmospheres for annealing and hardening [iron and steel],

B., 1352.

Owens, J. S., future developments in the investigation of atmospheric pollution, B., 624. Smoke of cities, B., 985.

Owens-Illinois Glass Co., storage-battery plate constructions, (P.), B., 1074. See also Kinker, C. C., and Lufkin, G. Ower, E., measurement of air flow, B.,

Oxford Paper Co. See Heritage, C. C.

Oxford Varnish Corporation, obtaining decorative surfaces, (P.), B., 264.

Decorative glass panel, (P.), B., 783.

Imparting [lustrous] decorative finishes articles (P.) 2014 ishes to articles, (P.), B., 814. Decorating the surfaces of articles, (P.), B., 814.

See also Casto, L. V.

Oxley, H. F. See Brit. Celanese.

Oyamada, T., constitution of fustin. V. Synthesis of 3-hydroxy-4'-methoxyflavanone, A., II, 206.

Oyler, E., and Bewley, W. F., disease of cultivated heaths caused by Phytophthora cinnamomi, Rands, B., 958.

Ozaki, G., biochemistry of carbohydrates. XVIII. Carbohydrate complex of serummucoid, A., III, 87.

Ozaki, M. See Seto, I.

Ozaki, T., hyperglycæmia following adrenalectomy, A., III, 348. Ozark Chemical Co. See Davis, S. H.

Ozawa, A. See Urushibara, Y.
Ozawa, T. See Matano, C.
Ozeki, S., Kotake, M., and Hayasi, K.,
anthelmintics. I. Anthelmintic action of alantolactone, A., III, 66.

Oziberger, R., new alloying method for bronzes, B., 794.
Ozolina, M. V. See Rabinovitsch, C. J.

Ozolins, J. See Zariņš, E.

Paar, W., raw sugar value [raw first-product value), consumption sugar value (white sugar value), and nett yield (rendement) [of German beet sugars], B., 718.

Pabst, A., crystal structure of plazolite, A., I, 585.

Pabst, E. See Wagner, Hans.

Paccard, R. See Leulier, A., and Révol, L.

Pacehioni, G. See Lanfranchi, A. Pace, D. M. See Mast, S. O.

Pace, E. R. See Cornbleet, T.

Pace, N. See Blum, H. F.

Pacheco, G., and Para, M., bacteriolytic action of menthol, A., III, 398.

Paehioli, R., and Mengoli, V., reaction of the fæces of children. I. Determination of fæcal p_{Π} ; effect of diet. II. Cause of fæcal p_H , A., III, 203.

Pachon, M., radium recovery at Port Hope, B., 926.

Pacific Car & Foundry Co. See Finlayson, A.

Pacific Flush Tank Co. See Beddoes, H. Pacific Lumber Co. See Carson, F. L. Pacini, A. E., and Taras, M. H., colour test for vitamin-A, A., III, 493. Pacini, A. J. See Near, H. B.

Packard, W. G. T., superphosphate—its history and manufacture, B., 235.

Packendorf, K. G., structure of vitamin-A, -B₁, and -B₂, A., III, 280. Packer, H. W. See Whitford, A. C. Packie, J. W. See Standard Oil Develop-

ment Co.

Pacsu, E., and Cramer, F. B., ketone sugar scries. VII. Action of titanium tetrachloride on methylfructoside acetates, A., II, 325.

See also Cramer, F. B., and Green, J. W. Paddock, L. S., Rinehart, C. A., and Industrial Patents Corp., tendering of meat, (P.), B., 617.

Paden, J. H., and Adkins, H., synthesis of pyrrolidines, piperidines, and hexa-hydroazepines [hexamethyleneimines], A., II, 113.

Paden, W. R. See Cooper, H. P.
Padgett, A. R., and Degering, E. F.,
preparation and properties of 2:3:4:6tetraethyl-a-methyl-d-glucoside and of 2:3:4:6-tetraethyl-d-glucose, A., II, 178.

Padmanabhan, R., fluorescence of acetone vapour, A., I, 494.

Padovian, C., gasification of mineral oils, (P.), B., 411.

and Franchetti, P., synthesis of methane from carbon monoxide and hydrogen, B., 414.

See also Lavi, M. G.

Padwick, G. W., growth factor influencing development of Ophiobolus graminis, Sacc., A., III, 396. Paechnatz, G. See Noack, K.

Pachr, H. W., ionisation on gases offected by alternating current, A., I, 541.

Paffenbarger, G.W. See Volland, R.H.Page, A. B. P., and Lubatti, O. F., determination of fumigants. VIII. Sampling from small spaces, B., 503. Absorption of fumigants under reduced pressure, B., 1281.

Page, A. E. See Creamery Package Manufg. Co.

Page, I. H., Kirk, E., and Van Slyke, D. D., plasma-lipins in chronic hæmorrhagic nephritis, A., III, 419. Plasma-lipins in essential hypertension, A., III, 419. See also Van Slyke, D. D.

Page, J. M., jun. See Standard Oil Co. Page, R. See Brit. Celanese.

Page, R. O., and Holland, H. C., nature of combination of wattle-bark tannin with collagen. II., B., 475.

Page Contracting Co. See Vincent, T. C., jun.

Pagel, W. See Harris, L. J.

Pagelli, A., cement-bound macadam surfacings, B., 243.

Paget, H., liquid acids of sapucainha oil, A., II, 320.

Paget, M., determination of the erythrocyteplasma chloride ratio, A., III, 113, 337. and Danes, blood-chlorine and gastric

acidity, A., III, 169.

and Pierrart, G., determination of bloodcholesterol; precipitation of the cholesterol-digitonin complex in wateracctone-trichloroethylene medium, A., III, 291.

and Tilly, identification of different barbituric acids with Millon's reagent, A., II, 268.

See also Chabanier, H.

Paget, R. F., correlation of coal seams by microspore analysis: seams of Warwickshire, B., 6.

Pahlke, H. See Roth, W. A.

Paic, M., ultra-violet absorption spectra of coproporphyrin and of some of its metallic complexes, A., I, 8. Identification of pigment produced by diphtheria bacillus, A., III, 182. Porphyrin of toxic diphtheria broth, A., ÎII, 397.

See also Levaditi, C.

Paige, S., asbestos deposits of Thetford District, Quebec, A., I, I, 270.
Pailer, M. See Christiani, A. von.

Paillard, H. See Briner, E.

Paille, R. See Kopaczewski, W.

Paillot, A., biology of the codling moth and the insecticidal and fungicidal treatment of apples and pears, B., 714.

Pain, A. K. See De, P. K.

Paine, C. G. See Finklestone-Sayliss, H.

Paine, H. W. See Clewell, J. H.

Paine, R. E., and Magnesium Development Corp., [free-cutting magnesium] alloys, (P.), B., 252. [Magnesium-base] alloys, (P.), B., 359. [Free-cutting magnesium-base] alloys, (P.), B., 1072. See also Aluminium, Ltd.

Paint & Varnish . Research Laboratory, Berlin, packing of pigments [in paint films], B., 590. Yellowing of nitrocellulose films as a function of film thickness and period of irradiation, B., 1088.

Painter, A. C., cold-storing plums, B., 836. See also Wormald, H.

Painter, E. P. See Franke, K. W.

Pajak, J., reactions of a-naphthylhydroxylamine with sulphuric or hydrochloric acid, A., II, 143.

Pajeau, R., bromination of aromatic compounds in presence of beryllium and ether, A., 11, 283. Beryllium bromide as a reagent in syntheses, A., II, 330.

Pakschver, A., and Kamischan, N., reconstruction of viscose reservoirs, B., 1034.

and Kiseleva, N., anomalous viscosity of viscose, B., 1034.

Pal, J. C. See Guha, B. C.

Pal, R. K., action of Lugol's iodine solution on the thyroxinised heart, A., III, 323.

and Prasad, S., effects of some products of digestion and accessory substances on rhythmical contractions of the isolated mammalian intestines, A., III, 309.

Palache, C., babingtonite and epidote from Westfield, Massachusetts, A., I, 154. Chalcomenite from Bolivia, A., I, 482.

Palacios, J., De la Cierva, P., and Rivoir, L., photometric measurments of X-ray reflexions. IV. Comparison of widely differing intensities, A., I, 193.

and Foz, O. R., molecular structure of quinhydrone, A., I, 170.

and Garrido, J., structural relations in solid reactions, A., I, 194.

Palazzo, F. C., Bouvier, C., Fouche, G., and Seguin, E., cellulose from lignified cellulosic matter, (P.), B., 1323.

Paleev, A. M., dynamics of formation of cell wall constituents of rye straw (S. cereale), A., III, 238. Composition of rye straw, B., 534.

Paley, T., preservation of strains of Aspergillus niger, A., III, 34.

Palfray, L., and Pannelier, R., derivatives of phenyl- and s-diphenyl-ethylene glycol, A., II, 496.

and Sabetay, S., preparation of alkoxyaldehydes by oxidation of glyceryl aethers with periodic acid, A., II, 275.

Palfray, L., Sabetay, S., and Kandel, J., catalytic hydrogenation of a-ionone; ionol, dihydroionol, tetrahydroionol, dihydroionone, tetrahydroionone, A., II, 108.

Sabetay, S., and Mastagli, P., reducing action of potassium and sodium benzyloxide on aldehydes, A., II, 102.

See also Naves, Y. R.

Pali, J. I., taking small samples of gas, A., I, 333.

Palit, N., modification of the Guareschi pyridine synthesis. I. and II., A., II, 387, 467.

Palkin, S., and Wallace, H. A., gauge for measurement of gas pressures, (P.), B., 1149.

See also Fleck, E. E. Palkina, I. M. See Belopolski, A. P.

Pall, D. B., modification of thiosulphate method for determination of cuprous oxide in determination of reducing sugars, B., 718. Accurate acidimetricalkalimetric titration of syrups and liquors in refinery control, B., 718.

Palladin, A. V., and Palladin, L. I., influence of acidic and basic diets on lactic acid content of muscle, and on its synthetic power in fatigue and training, A., III, 127.

Palladin, L. I., and Chaikina, B. I., effect of labour and training on lactic acid content and synthesising capacities of the muscles of normal and avitaminous guinea-pigs, A., III, 20. Sec also Palladin, A. V.

Palladina, O., Stiashkina, A., and Jakovlev, D., bacterial processing of margarine,

B., 363.

Pallanch, R. A., factors governing separation of lead and zinc in ore by flotation, B., 49.

Pallas, E., sheathing of cables with plastics, B., 936.
Pallister, P. R., and Smith, E. E., high-

voltage regulation, A., I, 635.

Palmaer, W., corrosion of metals, B., 1067. Palmer, A., poisoning by nicotine, A., III, 27.

Palmer, A. E. See Stieglitz, E. J. Palmer, A. R. See Lansley, A. S. B. Palmer, D. F., disease control in avocados,

B., 1401. Palmer, H. F., reclaimed rubber, B., 591.
Palmer, J. W., Smyth, E. M., and Meyer,
Karl, glucoproteins. IV. Determin-

ation of hexosamine, A., II, 371. See also Meyer, Karl.

Palmer, L. S., biological assay of vitamin-E; application to wheat germ and wheat-germ oil, A., III, 497.

Fitch, C. P., Gullickson, T. W., and Boyd, W. L., effect of a low-calcium diet on reproduction in cattle; effects of further reduction in calcium and removal of vitamin supplements, A., III, 475.

and Tarassuk, N. P., effect of adsorption membrane around the fat globules on curd tension of milk, B., I120.

Palmer, N. See Mottram, J. C.
Palmer, T. R., machines or apparatus for testing oils and lubricants, (P.), B., 323. Palmer, W. G., adsorption on measured surfaces of vitreous silica. II., A., I, 457. Palmer, W. J. D., design of heat-transfer

equipment, B., 987.
Palmer, W. W., and Leland, J. P., comparative calorigenic action of normal and pathological thyroid glands administered in equi-thyroxine doses, A., III, 42.

Palmieri, C. See Cianci, V

Palmiter, D. H., and Keitt, G. W., eradicant fungicides in relation to apple scab, B., 1106.

Palmqvist, S., determination of silica in quartzite by fuming down with hydrofluoric acid, A., I, 45.

Palmrich, L. See Pauli, W. Paltzer, R. See Rupe, H.

Pamfilov, A. V., Ivaniseheva, E. G., and Petrasch, A. A., morphology of pig-ments. VI. Oxidation of crystalline modifications of litharge, B., 369.

and Rosliakova, E. N., casein solutions, B., 80. Morphology of pigments; adsorptive power and activation of

soot, B., 467.

and Standel, E. G., chlorination of ferric oxide in presence of carbon, A., I, 143. Chemistry of titanium. IV. Action of chlorine on titanomagnetite con-centrate. V. Action of chlorine on sphene concentrate. VI. Mechanism of reaction, and products of chlorination of titaniferous materials, A., I, 257; B., 34.

See also Godnev, I. N.

Pan, L. C., leaching alunite with sulphuric acid, B., 435.

Panay, T. N., continuous flame spectrum of potassium, A., I, 157.

Pancirolli, F., animated cellulose and starch, A., II, 370.

See also Debenedetti, E.

Pancreol, Ltd., and Pickard, C. E., stripping of coloured [protein] materials, (P.), B.,

Pandalai, K. M., constitution of formic acid, A., II, 365. Nitrification in presence of organic matter, B., 164. Mechanism of nitrification in soil, B. 953. Determination of nitrous- and nitric-nitrogen in soils, B., 954.

See also Rao, G. G. Pandit, C. G., and Maitra, N. M., inhibition of individual types of cholera bacteriophage by vibrio extracts, A.,

III, 488. Pandya, K. C., and Vahidy, T. A., condensation of aldehydes with malonic acid in presence of organic bases. VIII. Condensation of o- and m-anisaldehyde. IX. Condensation of β-hydroxynaphthaldchydo(2-hydroxy-1-naphthaldehyde), A., II, 340, 5I3.

See also Bountra, R. K.
Panepinto, F. W., and Kilpatrick, M., dissociation constants of chlorophenolblue and iodophenol-blue, A., I, 616. Reaction of bromophenol-blue, iodophenol-blue, and chlorophenol-blue with

hydroxyl ion, A., I, 630. Paneth, F. A., chemical exploration of the stratosphere, A., I, 203, 269. Study of transmutation in the chemical laboratory, A., I, 276. Chemical elements and fundamental material; Mendeléev's view and the modern concept, A., I, 391.

and Glückauf, E., chemical detection of helium formed in beryllium by y-rays, A., I, 340.

Glückauf, E., and Loleit, H., spectro-scopic identification and manometric measurement of artificially produced helium, A., I, 108.

and Rosenblum, C., thermal precipitation of radioactive substances, A., I, 371.

Pang, L. T. See Pin, K. L.

Pángaro, J. A., homoglyeæmic or hypoglycæmic curves for injection of glucose, A., III, 248.

See also Landabure, P. B.

Pangborn, M. C. See Wadsworth, A. Pangga, G. A., common Philippine termites, B., 170. Preservatives for wooden and bamboo posts against ground-inhabiting termites, B., 676.

Panizzon, L. See Hartmann, M. Pankina, Z. See Davidova, M., and

Dobrjanski, A. F.

Pankov, A. M., dispersion of soils and subsoils as dependent on various conditions, B., 1382.

Pannekoek, A., fluorescence phenomena and central intensity in Fraunhofer lines, A., I. 208.

Pannelier, R. See Palfray, L.

Panning, G., iron-aluminium mixed oxide catalysts for water-gas synthesis, B.,

See also Schuster, F.

Panschiua-Trufanova, I., colorimetric determination of vitamin- B_1 , A., III, 153.

Panseri, C., temper hardness of aluminium bronzes. II. Aluminium bronzes containing iron, B., 687.

Panstwowe Wytwórnie Prochu. See Kardaszewicz, J.

Panteleeva, L. I. See Gortikov, V. M. Panting, R. M. See Williams, S. W.

Pantschenkov, G. M., and Oreschko, V. F., molecular polarisation and dipole moments of o-, p-, and m-dimethyl-cyclohexane, A., I, 601.
and Puzitzki, K. V., increase in viscosity

of oils under influence of ultra-short waves, B., 642.

Papademetriu, T. See Bredereck, H.
Papadikis, P. E., dibenzylidene-glucose and -glycuronic acid from 6-henzoyldiethylmercaptoglucose; synthesis another dibenzylideneglucose from 4:6bonzylideneglucose, A., II, 276.

Papafil, (Mme.) M. See Cernatescu, R.

Papapetrou, A., diamagnetism of an electron

gas, A., I, 404, 591.

Papavassiliou, M. J., and Libérato, S. N., identification of hypnotics in viscera, A., III, 309.

Pape & Co. G.m.b.H., working-up [oilrefining] acid sludge and similar materials, (P.), B., 412.

Paper Maker's Association, first report of the Paper Testing Committee [of the British Papermaker's Assoc.], B., 1037.

Paper Patents Co., crèped cellulosic wadding, (P.), B., 334. Stripping and transferring photographic films, (P.), B., 501. Coating of paper, (P.), B., 537. Reducing dusting in the manufacture of coated paper, (P.), B., 1194. See also Davis, M. N., and John, Hans.

Papilov, L. J. See Rosenblit, S. M. Papkov, S. P., and Kargin, V. A., heat of interaction of cellulose nitrate with

solvents. II., A., I, 611.

Papkova-Kvitzel, I. P., dependence of adsorption on weight of adsorbent, A., I, 24.

Papp, G. See Bay, Z.

Pappenheimer, A. M., jun., diphtheria toxin.

I. Isolation and characterisation of a toxic protein from filtrates of Coryne-

bacterium diphtheriæ, A., III, 434. and Johnson, S. J., diphtheria toxin. III. A simple gelatin hydrolysate medium and some properties of toxin produced thereon, A., III, 414.

Papsdorf, W., structural investigations of roughness and size of nuclei by electron interference, A., I, 227.

Paquet, M., enamels with cerium and zirconium oxides in enamelling of castiron baths, B., 547.

Para, M. See Pacheco, G. Parade, G. W., vitamin-B. I. Relationship between deficiency of vitamin- B_1 and bradycardia, A., III, 494.

Paramasivan, S., technique of painting

process in the Cave Temple at Sittannavasal, B., 261. Technique of painting process in the temple of Vijayalaya Cholisvarum in Pudukottah State, B.,

Pardee, A. M. See Boullion, L. F., and Shearer, P. A.

Parfentjev, I. A., purification of antitoxins. etc., (P.), B., 1136.

Parsianovitseh, I. A., and Schipizin, S. A., penetration of nickel ions into rock-salt, A., I, 286.

Parfitt, E. H., making and significance of cream and butter sediment tests, B., 612.

Parhon, C. I., and Cahane, M., water, calcium, and potassium content of grey and white matter of the brain in experimental tetany, A., III, 7.

and Ornstein, I., blood-protein, -lipin, -cholesterol and protein: lipin ratio in the hyperthyroxinised animal, A., III,

Parhon, F. See Vanghelovici, M. Pariente, A. C. See Ralli, E. P.

Parija, P., and Mallik, P., mechanism of bursting of fruits of Impatiens balsamina, Linn, A., III, 499.

Parijski, V. A., production of calcium carbide using peat coke, B., 903. Parini, V. P. See Tschulkov, J. I.

Paris, R., ternary alloys, A., I, 407.

and Mondain-Monval, P., influence of small quantities of metallic oxides on the crystallisation of zinc borate, A., I, 257.

See also Clerc, A., and Mascré, M. Parish, H. J. See Buttle, G. A. H.

Parisini, G., action of strychnine on salivary digestion, A., III, 309.

Parisot, A. See Laffitte, P.

Park, C. R., and Firestone Tire & Rubber Co., recovery of precipitates, (P.), B., 1090.

See also Wingfoot Corp.

Park, I. O., vitamin-A deficiency: studies with the visual photometer, A., III, 187. Parke, Davis & Co., di-secondary alkyl polyhydroxy phenols, (P.), B., 1176.

See also Dyson, G. M., and McCrea, A. Parker, A. See Walker, T. K.

Parker, Albert, problems of water supply, B., 297.

Parker, A. S., and Hottel, H. C., combustion rate of carbon; study of gas-film structure by micro-sampling, B., 8.

Parker, E. A. See Clark, G. L. Parker, E. R. (California), treatment of mottle leaf of citrus trees. II., B., 603. See also Reed, H. S.

Parker, E. R. (New York). See Brophy, G. R.

Parker, F. P. See Kracke, R. R.

Parker, G. H., and Scatterty, L. E., number of neurohormones in control of frog melanophores, A., III, 493.

Parker, H. C., and Chard, J. W., extraction of gold from saline solutions [sea-water], (P.), B., 800.

Parker, J. G., filtration of non-tannin solutions for analytical purposes [in tannin analysis], B., 817.

and Harvey, A., analysis of [vegetable] tanning materials, using dry chromed hide powders, B., 162.

Parker, \hat{K} . G., fire blight: overwintering, dissemination, and control of the pathogene, B., 602.

Parker, L. D. See Viekers-Armstrong,

Parker, M. E., and Shadwick, G. W., jun., chemical determination of aroma in butter and butter cultures, B., 1123.

Parker, M. M., cabbage fertilisation in south-west Virginia, B., 599. Effect of fertilisers on yield of narcissus bulbs,

Parker, R. C., smoke method of measuring supersonic velocities, A., I, 268.

Parker, Raymond C., anti-bodies in vitro, A., III, 197.

Parker, Ralph L. See Lamerson, P. G. Parker, Robert L., morphology of monazite, A., I, 431.

Parker, R. T. See Brit. Non-Ferrons Metals Res. Assoc.

Parker, T. W., foamed blast-furnace slag, B., 1059.

Parker, V. E., Hatfield, P. E., and Strickler, A., thermostat, A., I, 377.

Parker, $W.\ G.$ See Abbishaw, $A.\ V.$ Parker, $W.\ R.$ See Holbrook, $W.\ L.$

Parkes, A. S., use of bantam capons for assay of male hormone preparations, A., III, 151. Relative duration of action of various esters of estrone, estradiol, and cestriol, A., III, 229. Androgenic activity of ovarian extracts, A., III, 321. Source of androgenic and cestrogenic substances of the urine, A., III, **459.**

See also Callow, R. K., Deanesly, R.,

Klein, M., and Rowlands, I. W. Parkes, D. W. See Robinson Bros. Parkes, E. B. See Edwards, F. W. Parkes, G. D. See Chattaway, F. D.

Parkes, J. W., Hamilton, W. S., Sheehy, E. J., Murphy, P. A., Sherrard, G. O., Gorman, M. J., Mellon, D., and O'Connell, T., artificial and natural fertilisers, B., 1384.

Parkhurst, G. L. See Standard Oil Co. Parkin, B. S., bovine anaplasmosis: chemotherapy, A., III, 11. Intravenous administration of styrylquinoline [No. 314] in equine trypanosomiasis, A., III, 15.

Parkin, E. A., food relations of Lyctus powder-post beetles, A., III, 127. and Busvine, J. R., toxicity of hydrogen

cyanide to certain wood-boring insects, B., 916.

Parkin, M., and Turner, W. E. S., use of special alloys in the glass industry, B., 544.

Parkin, M. E. H. See Mouldrite, Ltd. Parkins, W. M., Hays, H. W., and Swingle, W. W., blood-sugar of the adrenalectomised dog, A., III, 277. See also Swingle, W. W.

Parkinson, D. See Tidmus, J. S.

Parkinson, D. B., Herb, R. G., Bellamy, J. C., and Hudson, C. M., range of protons in aluminium and in air, A., I, 488.

Parkinson, J. L., constant-temperature gasregulated water-bath, A., I, 265.

Parks, G. S., and Reagh, J. D., glass.
XV. Viscosity and rigidity of glucose glass, A., I, 355.

Parks, C. S., Shomate, C. H., Kennedy, W. D., and Crawford, B. L., jun., entropies of n- and iso-butane, with some heat capacity data for isobutane, A., I, 354.

Todd, S. S., and Shomate, C. H., thermal data on organic compounds. XVII. Heat capacity, entropy, and free energy data for five higher olefines, A., I, 124.

See also Ferry, J. D., Kennedy, W. D., and Todd, S. S.

Parks, W. G., and Moran, W. G., solubility of indium in mercury from 0° to 50°, A., I, 298.

Parlee, N. A. D., Dacey, J. R., and Coffin, C. C., homogeneous first order gas reactions. VIII. Decomposition of trichloroethylidene diacetate and trichloroethylidene dibutyrate, A., I, 570. Sec also Coffin, C. C.

Parmelee, A. E. See Du Pont de Nemours & Co., E. I.

Parmelee, C. H., and Onondaga Pottery Co., tunnel kiln, (P.), B., 441, 1206.

Parmelee, C. W., Badger, A. E., and Debenham, W. S., glass melts from alkali - lime-magnesia-alumina - borio oxide-silica mixtures, B., 1338.

and Harman, C. G., effect of alumina on surface tension of molten glass, B.,

.911.

and Lyon, K. C., maximum bubblepressure (Jaeger) method for measurement of surface tension of molten glass, B., 545.

See also Badger, A. E., McVay, T. N., and Thompson, C. L.

Parnas, J. K., and Mochnacka, I., rôle of inosic acid in muscular glycogenolysis, A., III, 92.

and Szankowski, W., interchangeability of pyruvic and oxaloacetic acids as hydrogen acceptors in muscle glycolysis, A., III, 422.

and Umschweif, B., determination of pentoses in adenylic nucleotides, A., III, 295.

Parnell, I. W., bionomics and control of bursate nematodes of horses and sheep. III. Toxicity of urine and related substances for sclerostome larvæ in fæces. IV. Lethal effects of some nitrogenous

fertilisers on the free-living stages of sclerostomes, B., 172, 1255. Survival of the eggs and free-living larvæ of sclerotomes on pasture, B., 1254.

Parnum, D. H. See Martin, L. C.
Parodi, M., borates and oxides in the far infra-red, A., I, 344. Transmission of oxides in the far infra-red, A., I, 393.

Parodi-Delfino, B., acetylated alkyltri-methylolmethanes and their use [in explosives], (P.), B., 503. Explosives, (P.), B., 503

Parpart, A. K. See Jacobs, M. H., and Shapiro, H.

Parraga, C. F., apparatus for treatment of

ores, (P.), B., 1224.
Parratt, L. G., and Richtmyer, F. K., widths of Ka X-ray satellite lines, A.,

I, 540. See also Richtmyer, F. K., and Shaw, C. H.

Parravano, A., artificial marble slabs, (P.), B., 677.

Parravano, N., and Caglioti, V., puzzuolanas, B., 912. and Centola, G., nitration of hemp, B.,

Parrett, A. N. See Du Pont de Nemours & Co., E. I.

Parrett, H. H., metallurgical aspect of the Fourdrinier [paper-machine] wire, B., 451.

Parrish, $C.\ I.$ See Egloff, G.

Parrish, E. See Wood, J. W. Parrish, W. C., insecticide, (P.), B., 74.

Parrod, J., effect of certain substances on fermation of hydrocyanic acid by oxidation of fructose or alloxan with ammoniacal copper salts, A., II, 235.
Parrot, J. L. See Binet, L., Chabrol, E.,

and Ungar, Georges.

Parschin, A. N., nitrogenous bases of the extract of dog's muscle, A., III, 87.

Parsons, C. S., investigations in ore dressing

and metallurgy, B., 1354.

Parsons, D. E. See McBurney, J. W.

Parsons, H. T. [with Kelly, E.], comparison of antitryptic activity of egg-white with its capacity to produce a characteristic nutritional disorder, A., III,

Lease, J. G., and Kelly, E., interrelationship between dietary egg-white and requirement for a protective factor in the cure for nutritive disorder due to egg-white, A., III, 189.

See also Kelly, E., and Lease, J. G. Parsons, J. D. See Bowden, R. C. Parsons, J. L. See Jackson, D. T.

Parsons, L. B., and Holmberg, C. O., estimation of water in salad oil and determination of its solubility at ordinary temperatures, B., 1233.

Parsons, L. G., and Smallwood, W. C., anæmia of infancy and early childhood. X. Anæmia of infantile scurvy, A., III, 122.

Parsons, R. M., and Parsons Co., R. M., bubble column, (P.), B., 995.

Parsons Co., R. M. See Parsons, R. M. Parsy, G., determination of p_H of sulphonated oils, B., 942.

Parten, J. R. See Dayson, S.

Parthasarathy, S., diffraction of light by ultrasonic waves: test for polarisation, A., I, 70. Critical opalescence of carbon dioxide, A., I, 167. Clustering in simple liquids, A., I, 168. Dispersion of sound velocity in liquids, A., I, 557.

[with Nath, N. S. N.], visibility of ultrasonic waves in liquids, A., 1, 70.

Parti, Y. P., and Samuel, R., absorption spectra of carbon and tin halides in the vapour state, A., I, 596. See also Asundi, R. K.

Partington, J. R., early history of phosphorus, A., I, 584. Oxidation of ammonia, B., 1333.

and Coomber, D. I., dipole moments of some aliphatic aldehydes, A., I, 221.

and McKie, D., historical studies of the phlogiston series. I. The levity of phlogiston, A., I, 636.

and Towndrow, R. P., heterogeneous equilibria with deuterium, A., I, 518. See also Cowley, E. G., and Maxwell,

Partington, P. P., production of sympathin in response to physiological stimuli in the unanæsthetised animal, A., III, 263.

Partisch, K. J., cause of discoloration in solid soaps, B., 696. Recovery of silver from photographic fixing baths, B., 1409. Parton, H. N., abnormal vapour pressures in potassium chloride solutions, A., I, 302.

See also Hounsell, E. R., and Wilkinson, L.

Partos, A., sex and cells. I.—III., A., III, 150.

Partridge, E. P., and Fragen, N., recovery of potassium salts from minerals, (P.), B., 542.

See also Davidson, J. M., and Schroeder, W. C.

Partridge, F. C., identification of kimberlite and kimberlite minerals by spectroscopic and other methods, A., I, 52.

Partridge, H. E., settling apparatus, (P.), B., 303. Vats for dye and other liquids, (P.), B., 402.

Partridge, H. M. See Bowles, J. A. C.

Partridge, J. H., testing of refractory blocks for glass-tank furnaces, B., 439.

See also Gen. Electric Co. Partridge, N. L., and Veatch, J. O., influence of various phases of Bellafontaine fine sandy loam and Whitenshaw silt loam on growth of apple trees, B., 600.

Partridge, S. M. See Kenyon, J. Partsch, F. W., evolution of sized-paper drying, B., 894.

Pascal, E., alkaline extract of anterior pituitary and germination, A., III, 190. Alkaline extract of anterior pituitary and

plant growth, A., III, 190.

Pascal, P., life and work of Henry de Chatelier (1850—1936), A., I, 584. Michot-Dupont process for low-temperature carbonisation of coal, B., 637.

Pascalino, V. See Augusti, S.

Pasch, W. See Rieke, R. Paschevitsch, V. See Kiesel, A.

Paschke, M., and Peetz, E., pig iron, (P.), B., 248.

See also Schneider, Eugen.

Paschkovskaja, A. G. See Ischkin, I. P. Pasedach, H. Sec Wieland, H.

Pashley, E., and Robinson & Sons, cellulose

wadding, (P.), B., 30.
Pasinski, A. G. See Petrov, I. T.
Pasqualini, R. Q., diurcsis in hypophysectomised toads after deprivation and injections of water, A., III, 39.

Pasquill, F. See Chalmers, J. A.

Passauer, H., tunnel kilns for simultaneous annealing of various kinds of glassware,

Passedouet, H. See Carré, P.

Passerini, L. See Natta, G.
Passerini, M., and Casini, V., carbylamines.
XXI. Reaction with 1-phenyl-3methyl-5-pyrazolone, A., II, 433.

and Ragni, G. [with Cusmano, G.], reaction between Schiff's bases and pyrazolone derivatives, A., II, 117.

Passinski, A. G., and Rabinovitsch, A. I. viscosimetry of highly viscous lyophilic colloids. II. Application of viscosimeters based on Stokes' law, A., I, 27.

Passmore, R., and Yudkin, J., effect of carbohydrates and allied substances on urease production by Proteus vulgaris, A., III, 146.

See also Harris, L.J.Passonina, V.J. See Smorodincev, I.A.Pastac, I., selective destruction of weeds, (P.), B., 1256.

Pasternack, R., Giles, W. R., and Pfizer & Co., C., reaction product of hydrated aluminium oxide and gluconic acid, (P.), B., 526.

Pastonesi, G., evaluation of the hydrocarbons in petroleum, B., 406. Influence of diluent gases in high-pressure syntheses, B., 539. See also Natta, G.

Pastor, C. T., artificial horse hair, (P.), B., 127.

Pasveer, A., pipettes for bacteriological investigations, A., III, 490.

See also $\tilde{S}\ddot{o}hngen$, N. L.Patania, A. See Cavalli, F. Patat, F. See Herzberg, G.

Patek, A. J., and Daland, G. A., effect of adrenaline injection on blood of patients with and without spleens, A., III, 37.

Patek, J. M., separation of slime and sand suspensions, (P.), B., 741.

Patel, A. M., absorption of dyes by viscose, B., 30.

See also Acharya, B. N.

Patel, M. S., Bombay oil of limes, B., 1407. See also Patel, N. M.

Patel, N. M., and Patel, M. S., cashew nut-shell oil; changes produced in the oil by action of heat, B., 464.

Patel, R. P., and Rönnmark, B., action of protamine-insulin in rabbits in relation to its standardisation, A., III, 152.

See also Ing. H. R.

Patent Engineering Corporation. See Rockwell, E. A.

Patent & Licensing Corporation. See Fain, J. M., Hulst, J. van, and Kirschbraun, L.

Patent-Treuhand Gesellschaft für elek-trische Glühlampen m.b.H., luminous electric-discharge tubes, (P.), B., 56. Luminous electric-discharge devices, (P.), B., 56. Luminous electric-discharge lamps, (P.), B., 56, 362. Electric-dischargo devices omitting ultra-violet radiation, (P.), B., 149. [Electrodes for extra-high-pressure], electric-discharge devices, (P.), B., 255. [Mercury vapour] electric-discharge devices, (P.), B., 255. Thermionic electrodes adapted to be heated by an electric discharge, (P.), B., Electric incandoscence lamps, (P.), B., 362. Leading-in wires adapted to be sealed through vitreous envelopes, (P.), B., 363. Sealing of electrical conductors through quartz envelopes, (P.), B., 583. Resistances having negativo temperature coefficients, (P.), B., 695. Electric-discharge lamps, (P.), B., 1075. Intermediate glasses for sealing conductors into quartz vessels, (P.), B., 1207. Glasses for electric-discharge devices, (P.), B., 1207. Quartz to metal joints, (P.), B., 1207. [Ne] gas-filled electric-discharge devices, (P.), B., 1231. Refractory glasses, (P.), B., 1342. Seo also Gen. Electric Co.

Patentaktiebolaget Gröndal-Ramén. See Haglund, G.

Patents Research Corporation. See Wanamaker, E.

Paterson, A., (P.), B., 466. soap-making machinery,

Paterson, H. A., grinding of jack pine for newsprint manufacture, B., 424.

Paterson, J. L. H. See Maizels, M.

Paterson Parchment Paper Co. See Bennett, C. G.

Pathuis, J. C. See Smits, A. Patil, B. V. See Hirwe, N. W.

Patiocha, A. M. See Morgulis, N. D. Patkowski, J., variation of continuous

absorption of bromine vapour with density and temperature, A., I, 385.

Patnaik, M. See Sankaran, G.

Paton, F. J., biological origin of pentoses, A., III, 445.

Paton, J. G. See Imperial Chem. Industries. Paton, J. P. J., and Eaton, J. G., sulphæmoglobinæmia and methæmoglobinæmia following administration of paminobenzenesulphonamide, A., III, 308. Patras, M. C. See Chang, S.

Patrick, J. C., plastic materials [containing sulphur], (P.), B., 63. Articles comprising plastic materials, (P.), B., 468. Resilient articles, (P.), B., 947. See also Martin, S. M., jun. Patrick, L. B. See Finklestone-Sayliss, H.

Patrick, W. A., and Cohan, L. H., rate of sorption of water vapour on silica gel

and iron-silica gel, A., I, 299.

Patruschev, V. I., inheritance of biochemical characters by animals and its relation to their growth. I. Gluta-thione concentration in the blood and difference in size of breeds of farm animals. II. Catalase content of the blood of horned cattle and sheep, A., III, 248.

Patry, M., action of ethyl alcohol on aqueous solutions of potassium tellurate, A., I, 258. Combustion and detonation of solid explosives, B., 1278, 1411.

Patschanova, R. See Kozlov, N. Patschky, A. See Lindner, A. F.

Patterson, A. L., determination of size and shape of crystal particles by X-rays, A., I, 552.

See also Cameron, C. H.

Patterson, H. S. See Cawood, W.

Patterson, J., blood-sugar method based on ferricyanide-indigocarmine titration, A., III, 113. Chemical diagnosis of preg-

nancy, A., III, 419.

Patterson, J. B. E., cobalt and sheep diseases, A., III, 418.

Patterson, S. D. See Mason, S.

Patterson, T. S., Jean Beguin and his "Tyrocinium Chymicum," A., I, 481. and Holmes, G. M., influence of solvents and other factors on rotation of optically active compounds. XXXV. Attractive power and solvent effect on rotation, A., I, 513.

and Lamberton, A. H., influence of solvents and other factors on rotation optically active compounds. XXXVI. Asymmetric solvent action, A., I, 513. "Green" ethyl tartrate, A., II, 321.

Patterson, W. C., Weiland, J. H., Reeburgh, S. L., King, R. A., and Huntington, R. L., condensation of steam and heptane on vertical tubes, B., 988.

Patterson, W. H., determination of deuter-

ium oxide-water mixtures, A., I, 630.
Patterson, W. I., Dyer, H. M., and Du Vigneaud, V., synthesis of di-N-methylhomocystine and N-methylmethionine and study of their growth-promoting ability in connexion with a cystinedeficient diet, A., II, 9.
Patterson, W. S., and Metcalfe, W., de-

composition of pyrites during laboratory carbonisation of Durham coking coal,

B., 1294.

Pattilloch, D. K., and Pattilloch, I. B., paper, (P.), B., 29.

Pattilloch, I. B., and Pattilloch Processes,

paper, (P.), B., 536. Pattilloch, I. B. See Pattilloch, D. K. Pattilloch Processes, Inc. See Pattilloch,

D. K. Pattin, H. S. See Kruger, P. G. Patton, A. R., glycine contents of proteins of normal and chondrodystrophic chick embryos at different stages of development, A., III, 467.

Patton, J. R., and Ferguson, J. B., baseexchanging properties of synthetic alumino-silicate materials, A., I, 299.

Patton, M. B. See McKay, H. Patwardhan, V. N., occurrence of a phytinsplitting enzyme in the intestines of rats, A., III, 220.

See also Niyogi, S. P.Paty, M. See Quelet, R. Patzelt, R. See Brass, K.

Patzenhauer, A. See Pollak, L.

Patzsch, H., differentiation of butter from pasteurised and unpasteurised cream, B., 181. Detection of lignified plant

constituents, B., 286.

Pauk, W. F., fundamentals of extremepressure lubricants, B., 870.

Paul, G. W. See Robertson, P. W. Paul, Hans, influence of wet steam in the low-pressure stages on the operation and construction of [steam] turbines, B., 1285.

Paul, Harry. See Hilditch, T. P. Paul, I. I. See Nikitin, E. K.

Paul, M., variation of entropy increase in quasiadiabatic work processes with temperature and velocity of expansion, A., Ĭ, 354.

Paul, M. A., and Hammett, L. P., acid catalysis in sulphuric acid-acetic acid solutions; rate of bromination of mnitroacetophenone, A., I, 36.

Paul, P. K., phthalide formation, A., II, 151. Paul, R., action of Rancy's nickel on some aldoximes, A., II, 152. Hydrogenation of alcohols derived from furan, A., II, 298. Transposition of aldoximes under influence of Raney's nickel, A., II, 323. Hydrogenation of certain oximes by aid of Raney's nickel, A., II, 324.

and Cottin, H., synthesis of ethylenic amines, A., II, 279.

and Hilly, G., Raney's nickel [catalyst], A., I, 90.

and Normant, H., action of furfuryl bromide on sodium phenoxide; o-furfurylphenol and furfuryl phenyl ether, A., II, 385.

Paul, W., spectrographic detection of fluorine, A., I, 96.

Paulais, R., distribution of nickel in organs of lamellibranch molluses, A., III, 7. Copper, zinc, and cobalt in organs of lamellibranchs, A., III, 455.

Pauli, W., and Baczewski, A., structure of platinum sols. II. The platinum hydroxosols, A., I, 79.

Kölbl, W., and Laub, A., structure of

highly-purified sulphide sols. · II. Antimony trisulphide sol, A., I, 514. Kölbl, W., and Linsker, A., comparative

electrochemical study of highly purified lyophilic sols. IV. Constitutive basis of electrochemical peculiarities of very pure acidoid sols of vegetable gums, A., I, 410.

and Laub, A., constitution of highly purified sulphide sols. I. As₂S₃ sol, A., I, 237.

and Palmrich, L., comparative electrochemical studies of highly purified lyophilic sols. I. Gum arabic sol. II. Silicic acid sol. III. Agar sol, A., 1, 303, 360.

See also Milazzo, G.

Pauling, H., [alkali] nitrates, (P.), B., 237. Pauling, L., diamagnetic anisotropy of aromatic molecules, A., I, 20.

and Brockway, L. O., adjacent charge rule and structure of methyl azide, methyl nitrate, and fluorine nitrate, A., I, 119. Carbon-carbon linking distances; electron-diffraction investigation of ethane, propane, iso-butane, neopentane, cyclopropane, cyclopentane, cyclohexane, allene, ethylene, isobutene, tetramethylethylene, mesitylene, and hexamethylbenzene; revised values of covalent radii, A., I, 448.

and Sherman, J., quantitative discussion of linking orbitals, A., I, 500.

See also Bauer, S. H., and McCoy, H. N. Pauls, E., brewing of beer, (P.), B., 1396.

Paulsen, F. See Kylin, E.
Paulsen, P. A., wood pulp, (P.), B., 895.

Paulus, M.~G.~ See Standard Oil Co. Pauschkin, J.~M., energy of carbon atoms, and reactivity of organic molecules, A., I. 15.

Pauthenier, M., and Martin, C., limiting electric charge of fine particles, A., I, 163.

Paycek, P. L., Peterson, W. H., and Elvehjem, C. A., effect of growth conditions on yield and vitamin- B_1 of yeast, B., 965.

Pavelka, F., miero-oven, A., I, 427. and Kirigin-Mardegani, J., dielectric constants. II., A., I, 332.

Pavitt, W. H., coke-oven structure, (P.), B., 643.

See also Wilputte, L. N.

Pavlas, P., composition of sugar-juice evaporator-effect vapours and condensates, B., 380. Factors affecting colorimetric determination of harmful nitrogen [in beets], B., 1108. Sec also Staněk, V.

Pavlinov, A. A. See Baschkirov, A. N. Pavlinova, A. V.. alkalimetric determination of aluminium in presence of salts of monohydroxy-acids. I. and II., A., I, 47, 426.

Pavlov, M. A., use of oxygen in ferrous metallurgy, B., 43.

Pavlov, P. J. Sec Juriev, J. K.
Pavlov, P. N., theory of rapid and slow
coagulation, A., I, 238.

and Engelstein, M. A., influence of cations and anions on tensile strength of agar and gelatin, B., 704.

Pavlov, S. A. See Smorodincev, I. A. Pavlova, L. N. See Bachromeev, I. R., and Toptschiev, K. SPavlova, N. P. See Schemjakin, F. M.

Palova, P. I., artificial alteration of reaction of water reservoirs for control of larvæ of the malaria mosquito, B., 849.

Pavlovitsch, P., polymerisation of vinyl chloride in solutions and emulsions, B., 1237.

V., and Schtschekin, Z., Sudakov, substituting rubber cements with aqueous latex dispersions in preparation of artificial leather, B., 375.

Pavlu, V. See Soare, A.

Paweck, H., and Krause, R., simultaneous recovery of metallic antimony and carbon disulphide from sulphide ores in the electric furnace, B., 1354.

Pawelzik, H., fish oils, B., 1082.

Paxton, B., and Chicago Hydraulic Oil Co., hydraulic-pressure fluid, (P.), B., 1290.

Paxton, H. C., radiations emitted from artificially produced radioactive substances. III. β -Ray spectrum of ^{32}P , A., I, 162. Positrons from deuteronactivated phosphorus, A., I, 490. Payette, J. A., and Gen. Plate Co., pen-point,

(P.), B., 581.

Payfer, R. See Grossfeld, J. Payman, W., testing of permitted explosives, B., 91. Classification of permitted explosives, B., 396. Choice of a permitted explosive, B., 623. Coalmining explosives used in other

countries, B., 845.
and Shepherd, W. C. F., explosion
waves and shock waves. IV. Quasidetonation in mixtures of methane and

air, A., I, 312.

Payn, R. C. See Imperial Chem. Industries. Payne, B. H., and Stulz-Sickles Co., [steel] blanks, (P.), B., 147.
Payne, C. J. See Anderson, B. W.
Payne, C. Q., roasting and heat treatment

of ores and minerals, (P.), B., 935.

Payne, C. R., "tegul": sulphur jointing compound for bell and spigot pipe, B., Î41.

See also Duecker, W. W., and Stevens, D. R.

Payne, F. E. See Howland, E. G.

Payne, H. F., permeability and structure of films, B., 155.

and Gardner, W. H., permeability of varnish films; relative effect of structure and other factors, B., 1089.

Payne, J. H., solubility of lithium and sodium fluorides, A., I, 357.

Fukunaga, E., and Kojima, R., properties of bagasse lignin extracted by the dilute nitric acid method, B., 1186.

Payne, J. M. See Curtin, L. P.
Payne, R. J. M., and Haughton, J. L.,
alloys of magnesium. IV. Constitution of magnesium-rich alloys of magnesium and silver, A., I, 73.

Payne, W. H., and Amer. Rolling Mill Co., rolling-mill roll, (P.), B., 249.

Paziuk, V. C., influence of nitrogenous nutrients on acetone-ethyl alcohol fermentation, B., 486.

Pazsiczky, G. V., glass-fibres, B., 670.

Pazzaglia, L., decomposition of nitrogenous

substances [cheese, etc.], B., 491.

Peabody, E. H., Martin, Walter H., and Peabody Eng. Corp., regulation of viscosity of liquids, (P.), B., 1148.

Peabody Engineering Corporation. See

Peabody, E. H.

Peachin, W. S. See Cunningham, G. E.
Peacock, D. H., and Gwan, Y. S.,
polyamines. III. Preparation of unsymmetrical amines of the type NHR·C₂H₄·NH·C₂H₄·NH₂ and NH₂·C₂H₄·NH·C₃H₆·NH₂, and action of ammonia on di-p-toluenesulphonylbis- $(\beta$ -chloroethyl)ethylenediamine, A., II, 401.

and Tha, P., benzylation of aromatic amines. V. Reactions between o-, m-, and p-cyanobenzyl chlorides and aniline, ethylaniline, and dimethylaniline, A., II, 334.

See also Chowdhury, J. C.

Peacock, M. A., roselite and the rule of highest pseudo-symmetry, A., I, 51. Crystallography of axinite and the normal setting of triclinic crystals, A.,

Peak, D. A., stereochemistry of the sterols and the bile acids, A., II, 455.

Peakes, G. L., measuring the plasticity of hot-moulding compounds, B., 1369. Peakes, L. V., jun. See Prescott, S. C.

Peale-Davis Co. See Davis, K.

Pearce, E. S., and Railway Service & Supply Corp., waste reclamation, (P.), B., 1166. Pearce, G. W., and Avens, A. W., phaserule studies of the calcium arsenates, A., I, 463.

Pearce, J. G. See O'Neill, H.

Pearce, J. N., and Eckstrom, H. C., vapour pressures and some thermodynamic properties of aqueous solutions of nickel chloride at 25°, A., I, 463.

and Hopson, H., vapour pressures of aqueous solutions of sodium nitrate and potassium thiocyanate, A., I, 463. and Pumplin, G. G., apparent and partial molal volumes of ammonium chloride and of cupric sulphate in aqueous solution at 25°, A., I, 459. Vapour pressures and activity coefficients of aqueous solutions of ammonium chloride at 25°, A., I, 463.

and Smith, L., potential of the silversilver thiocyanante electrode, A., I,

Pearce, S. J. See Yant, W. P.
Pearce, W. T., comparative effect of
several types of resin on the drying of linseed, perilla, sardine, and soya-bean

oils, B., 585.

Pearl, A. See Natelson, S., and Sobel, A. E.

Pearman, F. H. See Drew, H. D. K. Pearsall, W. H., and Billimoria, M. C., losses of nitrogen from green plants, A., III, 500.

and Loose, L., growth of Chlorella vulgaris in pure culture, A., III, 105. Pearse, C. K., device for measuring the

absorption rates of soils, B., 819. Pearse, H. L., effect of phenylacetic and indolylbutyric acids on growth of tomato plants, A., III, 160. Effect of heteroauxin on growth of broad bean plants in water culture, A., III, 330. Apple trees in water culture, B., 823.

and Garner, R.J., use of a-naphthylacetic acid for rooting softwood cuttings of fruit-tree stocks, B., 1387.

Pearse, L., chemical treatment of sewage evaluated in A.P.H.A. Committee re-

port, B., 506. Pearse, R. W. B., and Gaydon, A. G., band spectrum of manganese hydride, MnH, A., I, 279.

See also Gaydon, A. G., and Hunter, A. Pearson, A. A., control of chromiumplating solutions, B., 1069.

Pearson, A. M., rôle of pine-tar oil in cattle fly sprays, B., 172.

Pearson, F. F. A. See Freund, E.

Pearson, J. L. See Imperial Chem. Indus-

Pearson, P. B., effect of a lysine-deficient dict on the æstrous cycle, A., III, 381. Elvehjem, C. A., and Hart, E. B., relation of protein to hæmoglobin building, A., III, 370.

Hart, E. B., and Bohstedt, G., effect of quality of protein on cestrous cycle, A., III, 467.

Pearson, R. W. See Sheets, O., and Truog, E.

Pearson, T. F., [mixing and conveying apparatus for manufacture of glass, (P.), B., 1053. Lehrs for annealing

glassware, (P.), B., 1342. and Robson, H. A., feeding of molten glass, (P.), B., 1342.

Pearson, T. G. See Anderson, J. S.; and Glazebrook, H. H.

Pearson, W. E. See Pearson, Ltd., W.

Pearson, W. J., and Newns, G. H., extreme degree of lcucocytosis in whoopingcough, A., III, 380.

Pearson, Ltd., W., and Pearson, W. E., mixing of paints, distempers, and other fluid preparations, (P.), B., 632.

Pease, R. N., inhibitory effect of packing on methyl ether decomposition, A., I, 190.

See also Echols, L. S. Peat, S. See Haworth, W. N.

Pechukas, A. See Johnson, W. C.

Peck, F. W. See Du Pont de Nemours & Co., E. I.

Peck, P. A., selection of flour for pastry, В., 1119.

Peck, R. E. See Glockler, G.

Peck, R. L. See Vosburgh, W. C. Peck, S. M., and Marx, W., chemistry of moccasin [snake-]venom. I. Hæmorrhagio and hæmolytic components, A., III, 453.

Peck, S. S. See Harkness, H. S.

Peck, W. C., extraction of vegetable materials; factors relating to preparation of drug extracts and tinctures, B., 86.

Pecker, J. S., centrifugal separating machine, (P.), B., 633.

Peckham, G. C. See Harmon, W. A. S.

Peco, G., and Ferreira, F. I., phenolsulphonephthalein in hepatic cirrhosis, A., ĪII, 256.

Peczalski, T., mutual reactions of metals and salts, A., I, 40. Production of coloured rings in a mass of a salt by

electrolysis, A., I, 525.

Peddinghaus, P. F., surface-hardening o iron and steel articles, (P.), B., 356.

Peddle, C. J., annealing lehrs, B., 544. Pedelty, W. H. See Hilditch, T. P. Pedersen, C. J. See Du Pont de Nemours & Co., E. I.

Pedersen, K. O., and Waldenström, J., bilirubin of blood and bile; application of electrophoresis and of the ultracentrifuge, A., III, 110.

See also Kekwick, R. A., and Tiselius, A. Pedersen, S., Maddock, W. G., and Coller, F. A., serum-sodium in relation to liver damage and hyperthyroidism, A., III, 419.

Pederson, C. S., and Tressler, D. K., improvements in manufacture and preservation of grape juice, B., 183.

Pederson-Bjergaard, K. See Kemp, T.

Pedlow, J. T., and Lisse, M. W., effects of electrolytes present in growth media on electrophoretic mobility of Escherichia coli, A., III, 225.

Peebles, D. D., and Western Condensing Co., casein, (P.), B., 285. Drying of liquid-containing materials, (P.), B., 991.

Peebles, J., and Glenfield & Kennedy, Ltd., liquid-screening apparatus, (P.), B., 305. Peek, R. L. See Simcox, I. J.

Peek, Frean & Co., Ltd., and Rondolin, L.,

edible wafer products, (P.), B., 727.

Peele, T. C., adsorption of bacteria by soils, B., 594. Effect of calcium on erodibility of soils, B., 1098.

Peerless Gold Leaf Co., Ltd., free gold leaf, (P.), B., 359. Free metallic [gold] leaf, (P.), B., 457.

Peermohamed, B. H. See Prasad, M.

Peet, G. D. See Wallace & Tiernan Co. Peetsehev, D. J., balance of water and fibre in a high-speed paper machine for production of newsprint, B., 26.

Peetz, E. See Paschke, M.

Peffer, E. L., device for testing hamocytemeters and other pipettes of small capacity, A., I, 583.

Pegau, A. A., mineralogy of the Virginia

William.

diabase, A., I, 587.

Pegler, J. L. See Pegler, W.

Pegler, W., and Pegler, J. L., non-shatterable glass, (P.), B., 38.

Pegram, G. B., Urey, H. C., and Huffman, J., distilling apparatus for separation of isotopes, A., I, 583.

See also Dunning, J. R., Fink, G. A.,

and Powers, P. N.

Pehrman, G., and Mylius, C. R. W.,
optical and crystallographic investigation of basic calcium salts, A., I, 19.

Pehrson, A. P. See Knibbs, N. V. S.

Pei, K. See Li, L.

Peierls, R. See Allen, J. F.
Peillon, M. Sec Jullien, A.
Peirce, F. T., serviceability of fabrics in

regard to wear; testing fabrics to foretell serviceability, B., 1040.

Peirce, J. O., and Kay-Fries Chemicals, sulphonic acid compounds, (P.), B., 524. Decomposition of fats or oils into fatty acids and glycerin, (P.), B., 587.
Peissachovitsch, S. S. See Rabinovitsch,

Peitzner, H. See Schlubach, H. H. Peive, J. V., determining potassium in soils for agrochemical purposes, B., 706.

Peisachov, I. L., derivation of formulæ for absorption coefficient of readily soluble gases, A., I, 456.

Pelagatti, U. See Ubaldini, I.

Pelczar, K., and Murza-Murzicz, S., influence of thyroxine on rabbit's serumphosphatase with reference to hyperthyroid diseases, A., III, 438.

Pelczarska, J., effect of intravenous injection of glycogen on the quantity of glycogen in the organs, A., III, 389.

Peldán, H., fermentation of glucose [and pyruvic acid] with butyric acid bacilli, A., III, 224. Fermentation with butyric acid bacilli. II., A., III, 317.

Peletier, L. A. See Boerlage, G. D. Pelikan, K. A., and Mikusch, J. D. von, two methods for determination of conjugated double linkings, B., 1081.

Pelipetz, M. G., and Doodchenko, P. L., match manufacturing, (P.), B., 296. Pelissier, J., deburring or carbonisation of

textile materials, (P.), B., 895. Pell-Walpole, W. T. See Campbell, (Sir)

John, and Hanson, D.

Pelletier, P. E. See Cloutier, L. Pellier, H. See Grimberg, A.

Pelly, R. G. See Houghton, G. U.

Pelshenke, P., and Schmidt, Ernst, influence of lipin content on baking qualities of wheat, B., 178.

Pelt, R. F. J. van. See Hirsch, G. C.

Peltier, G. L. See Suneson, G. A. Pelton, R. S., interrupted spot-welding [of metals], B., 1352.

Peltzer, \hat{A} , pulsating clutriator [for coal], B., 1151.

See also Merco Centrifugal Separator Co. Peltzer, A., jun. See Merco Centrifugal Separator Co.

Peltzer, J., simplified cheese-fat determination by Gerber's method, B., 613.

Pély, M. See Dzsinich, A.

Pember, F. R. See Gilbert, B. E. Pemberton, C. E., entomology, B., 481.

Pemberton, J. de J. See Rynearson, E. H.

Pembroke Chemical Corporation. See Kerschbaum, F. P.

Pemeller, G. See Rudkovski, D. M. Pemetzrieder, G., casting of molten or liquid material, (P.), B., 739.

Pen-Chlor, Inc. See Frank, K.

Pénau, H., and Audic, R., determination of soluble enzymes in official [pharmacopœial] preparations, A., III, 138. and Guilbert, J., determination of lipase

in official [pharmacopœial] pancreatin, A., III, 96.

Penberthy, G. C. See Cooley, T. B. Pendergast, O. W., adhesive, (P.), B., 1248.

Pendse, G. P., fruits of Solanum nigrum, Linn, I. Composition of oil from seeds, A., III, 446.

and Lal, J. B., constitution of seeds of Blepharis edulis, Pers. II. Composition of oil, A., III, 445.

Penfold, A. R., and Morrison, F. R., occurrence of a number of varieties of Eucalyptus radiata (E. numerosa) as determined by chemical analyses of essential oils. II., B., 979. Essential oil of Melaleuca alternifolia, B., 1133.

See also Bradfield, A. E.

Penick & Ford, Ltd., Inc. See Widmer, J. M.

Penley, H. H., and Gray, J. A., scattering of X-rays at very small angles, A., I, 287. See also Harrington, E. L.

Pennaneac'h, J. See Le Chuiton, F. Pennell, R. See Hershey, A. D. Penner, A. See Hollander, F.

Penner, A. J. See Kostlovski, M. T. Penners, K. See Pieters, H. A. J. Penney, G. W., new electrostatic precipit-

ator, B., 693.

Penney, W. G., electronic structure of some polyenes and aromatic molecules. III. Bonds of fractional order by the pair method, A., I, 286. and Anderson, J. S., co-ordination num-

bers eight, A., I, 602. and Kynch, G. J., absorption spectra evidence of the decomposition of the ground term of Nd+++ ion due to crystalline fields, A., I, 493.

and Sutherland, G. B. B. M., relation between form, force constants, and vibration frequencies of triatomic systems, A., I, 15.

See also Sutherland, G. B. B. M.

Penniman, W. B. D., oxidised products, (P.), B., 1013.

Smith, D. C., and Lawshe, E. I., determination of higher alcohols in distilled liquors, B., 607.

Penning, F. M., manometer for low gas pressures, particularly between 10-3 and 10-5 mm., A., I, 203. See also Kruithof, A. A.

Pennington, H. R., and Indiana Steel & Wire Co., flux-coated [welding] electrode, (P.), B., 1074.

Pennington, J., and Hickman, C. P., automatic dehydrating device [for tissues], A., III, 334.

Pennsylvania Coal Products Co. See Burroughs, S. G.

Pennsylvania Petroleum Research Corporation. See Fenske, M. R., and McCluer, ₩. B.

Pennsylvania Research Corporation, and Sinden, J. W., growing of mushroom spawn, (P.), B., 1108. See also Sinden, J. W.

Pennsylvania Salt Manufacturing Co., purification of caustic soda solutions, (P.), B., 134. Purification of chlorine, (P.), B., 1337.

See also Cushing, R. E. Pennsylvania State College. See Fenske,

M. R.Penquite, R., and Thompson, R. B., difference in quality of fibre [for poultry], B., 1404.

Penrose, L., and Quastel, J. H., metabolic studies in phenylketonuria, A., III, 129. Pensel, G. R., dyeing of leather, (P.), B.,

Penta, F., fossil carbon in the Mesozoic of Longobucco in Calabria, A., I, 156.

Pentecost, S. J. See Hall, A. J. Pentelow, F. T. K. See Thaysen, A. C.

Pentzer, W. T. See Allen, F. W. Peppel, W. J. See Sparks, W. J. Peragallo, I., filter candles, A., III, 101.

Pérard, J., problems arising in calculating vat-room plant [in beet-sugar distilleries], B., 967. Recovery of sugar in beet rootlets, B., 1117. Technical control in modern [sugar-beet] dis-

tilleries, B., 1259. and Grimaud, G., effect of vinasse on certain metals, B., 968.

Percival, E. E., and Percival, E. G. V., sugar osazones and their anhydrides, A., II, 400.

Percival, E. G. V., structure of osazones and isolation of a new hexosazone anhydride, A., II, 51.

Munro, J., and Somerville, J. C., structure of agar-agar, A., II, 178.

and Ritchie, G. G., addition compounds of the carbohydrates. III. Potassium hydroxido derivatives of cello-

biose, lactose, and galactose, A., II, 52. and Somerville, J. C., acetylation and methylation of agar-agar and the isolation of 2:4:6-trimethyl-a-d-galactose by hydrolysis, A., II, 445. Sce also Percival, E. E.

Percival, J. O., and La Mer, V. K., temperature dependence of energy activation in rearrangement of N-

chloroacctanilide, A., I, 87. Percival, R. T. See Andrew, J. H.Percival, S., activated charcoal, (P.), B.,

Perdrean, H. See Thiollais, R. Pereira, F. B., biochemical synthesis of organic sulphur compounds, A., III,

See also Jacobsohn, K. P. Pereira, J. See Galvão, P. E.

Pereira-Forjaz, A., Jacobsohn, K. P., and Tapadinhas, J., enzymic equilibrium in presence of heavy water; fumarases, A., III, 481.

Perelman, F., extension of Schreinemakers' method to multi-component systems, A., I, 565.

Perelman, T. B. See Suchich, V. A. Peretti, G., effect of unsaturated linkings and free alcoholic groups on pancreatio digestion of glycerides of higher fatty

acids, A., III, 211.

Peretz, B. G., and Tretiakova, E. W., acidproof lutes and concretes, B., 348.

Perey, (Mlle.) M., spectra of barium and strontium, A., I, 158.

See also Rosenblum, S.

Pérez Ibáñez, R., [determination of] bromine in flour and wheat, B., 969. Perfect Manufacturing Co. See Bollman, R. R.

Perfetti, A., tests on plastic mortars in relation to other tests, B., 1055.

Perfiliev, G., hydrogen film on a polarised metallic cathode, A., I, 33.

Perhab, J. L., maintenance of [water]

filter-plant equipment, B., 191. Periés, J., action of individual components of the vitamin-B complex on volume increase of the adrenal cortex produced by physical work, A., III, 494.

Perkin, H. J., Lahey, F. H., and Cattell, R.,

blood-iodine in relation to thyroid disease; basic concept of relation of iodine to the thyroid gland: an iodine-

tolerance test, A., III, 461.

Perkin, W. H., jun., Pollard, A., and Robinson, R., synthesis of brazilin and hæmatoxylin. IV. Synthesis of O-diethylenchematoxylone, A., II, 111.

Perkins, A. E., transferring milk yield to energy equivalent, B., 488.

See also Hunt, C. H.

Perkins, A. J., dissociation of a solid under inert gas pressure, A., I, 243.

Perkins, A. T., and King, H. H., base exchange in soil separates and soil fractions (sand and silt), B., 165. See also King, H. H.

Perkins, D. J. See French, H. S.
Perkins, G. A. See Carbide & Carbon
Chemicals Corp., and Union Carbide & Carbon Corp.

Perkins, M. A. See Du Pont de Nemours & Co., $E.\ I.$

Perkins, M. E. See Cohen, Barnett. Perkins, R. L. See Moses, F. G., and Nat. Aniline & Chem. Co.

Perkins, R. P. See Dow Chem. Co.

Perkins Glue Co. See Pierson, G. G. Perla, D., and Rosen, S. H., effect of hypophysectomy on natural resistance of adult albino rats to histamine poisoning, A., III, 149. and Sandberg, M., effect of complete

and partial hypophysectomy in adult rats on nitrogen, calcium, and phosphorus metabolism, A., III, 39.

See also Sandberg, M.

Perley, A. M. See Fourt, L. Perlinghi, (Mme.) S. L. T., and Rosen-blum, C., comparative densities of fresh and aged lead sulphate, A., 1, 175. See also Capron, P.

Perlitz, H., and Aruja, E., gold-sodium compound Au₂Na, A., I, 447.

Perlman, D., Davidson, D., and Bogert, M. T., synthesis of phenanthrenes from hydroxy-derivatives of β -phenylethylcyclohexanes; nature of the by-product, A., II, 11. Synthesis and properties of spirans from phenylpropyl-cyclanols [-cycloalkanols], A., II, 11.

Perlmann, G. See Herrmann, H.
Perlmuteer, S. Z., emulsifying and similar agents, (P.), B., 1314.

Permien, M., and Bausch, H., gasification of brown coal in the Rostock process, B., 405. Perna, F., recovery of coke from gas-producer ash, B., 638.

Perov, S. S., "anti-complex" of egg white, A., III, 374.

Perpérot, H., and Schacherl, F., differential tensimeter without a tap; vapour pressure of deuterates of copper sulphate, A., I, 308. Determination of small quantities of heavy water, A., I, 323. Do the different molecules of water in copper sulphate pentahydrate contain different proportions of deuterium oxide? A., I, 371. Perrakis, N., and Capatos, L., magnetochemistry of silver and copper; bivalent ions and mixed crystals, A., I, 293. Thermomagnetic study of the complexes $[Ag_xCd_y,4C_5H_5N]S_2O_8$, A., I, 451.

Perras, T., experimental osteodystrophia fibrosa produced by parathyroid hormone and its relation to vitamin-D, A., III,

Perrenoud, J. P. See Zimmet, D. Perret, A., and Banderet, A., relations between cyanide, cyanamide, and nitride of some elements of the rare-earth group, A., I, 257.

Perreu, J., equation of solubility of hydrates, A., I, 298. Heats of saturation and of hydration of sodium sulphate, A., I, 364. Solubility equation of a pure substance which forms a solid complex with the solvent, A., I, 456.

Perrichet, J. See Mathieu, J. P.

Perrier, A., translatory effect of deformation on metallic conduction, A., I, 70.

Perrier, C., and Segre, E., radioactive

isotopes of element 43, A., I, 491. Some chemical properties of element 43, A., I, 545.

See also Artom, C. Perrier, F., ionisation of air by electrified

dielectrics, A., I, 346. Perrier, M. I., and Lobunetz, M. M., use of liquid amalgams for analysis of hydroxynitro-compounds, A., II, 268. Determination of nitro-group of nitrobenzene, A., II, 268.

Perrin, F., Brownian movement of an ellipsoid; free rotation and depolarisation of fluorescence; translation and diffusion of ellipsoidal molecules, A., I,

Perrin, J.G. See Imperial Chem. Industries. Perrin, M. W., and Williams, E. G., effect of pressure up to 12,000 kg. per sq. cm. on reactions between amines and alkyl halides in acctone solution, A., I, 366.

Perrin, R., stony meteorites can furnish no indication of the nature of basic rocks, A., I, 269. Metals [steels and alloy steels], (P.), B., 932. and Lamberton, J., equilibria between metals and slags, B., 351.

Perrin, T. S., composition of siene beans; characteristics of sienc-bean oil, B.,

Perrine, J. H. See Musante, A. F. S. Perring, J. W., chemical colouring of metals, B., 146.

Perroncito, G., action of ethyl oxalate on pyrazolones, A., II, 307.

See also Crippa, G. B.

Perrot, E., Millat, L., and Colas, R., vitamin-C and its derivatives in the South American bark, Chuchuhuasha, A., III,

Perrot, H. See Meersseman, F. Perrot, L. See Arloing, F., and Morel, A. Perrottet, E. See Briner, E.

Perry, A. S., effect of sodium hydroxide on copper at high temperatures, B., 922. Perry, G. A. See Vahlteich, H. W.

Perry, H., and Grotefeld, A. W., tempering

of glass, (P.), B., 783.

Perry, I. H., effect of prolonged cyanide treatment on body and tumour growth, A., III, 460.

Perry, J. A.See Claffey, J. B.Perry, J. H. See Grasselli Chem. Co. Perry, R. G.Sce Brit. Celanese.

Perry, R. J. See Morgan Crucible Co.

Perschke, V., and Popova, A. N., velocity of polymorphic transformation of aand β-ammonium nitrate, A., I, 291. and Vinogradova, (Mme.) A., influence of

organic materials on chemical corrosion of metals, B., 246.

Persons, E. L. See Brian, E. W.
"Pertrix" Chemische Fabrik Akt.-Ges., positive electrode for galvanic cells, (P.), B., 1074.

Pertzov, V. N., mechanical properties of powders; effect of moisture on mechanical properties of clay paste, B., 911.

See also Veselovski, V. S.

Péru, use of olive oil as motor lubricant, B., 871.

Perutz, M., "iron-rhodonite" (from slag) and pyroxmangite and their relation to

rhodonite, A., I, 586.

Pervnschin, E. V., reagent bottle with an automatic zero-point burette, without

a stand, A., I, 583.

Pescara, R. P., gas-pressure generators and power plants including such generators, (P.), B., 1009.

Pesce, B., apparent molecular refraction of non-electrolytes in solution: carbamide in water, A., I, 236. Apparent molecular volumes of non-electrolytes in solution, A., I, 236. Apparent equivalent re-fraction of calcium and strontium nitrates in aqueous solutions, A., I, 237. Equivalent refraction of strong electrolytes in aqueous solution, A., I. 237. Apparent molecular volumes of strong electrolytes in concentrated solutions, A., I, 237. Modern refractometry, A., I, 266.

Pesch, K. L., and Damm, R., bactericidal and virulence-diminishing action of saliva on Pneumococcus, A., III, 434.

Pesch, T., defects in safety glass with cellulose ester layer, B., 546. Striations in safety glass, B., 547.

Peschek, K. See Fürth, O.

Peschkova, V. M., use of "aluminon" in

determining small quantities of aluminium, A., I, 263.

Pesez, M., colour reaction of morphine and alkaloidal derivatives [thereof], A., II, 360. Identification of allylbar-

biturates, A., II, 360. Pesina, A. G. See Sadikov, V. S. Pesina, E. J. See Weissfeiler, J.

Peski, A. J. van. See Shell Development

Peskin, A. R., hypoglycæmia with paradoxical sugar tolerance curve simulating peptic ulcer, A., III, 300.

Pestalozzi, S., evaluation of light-fastness of coloured materials, B., 231.

Pestemer, M., relation between chromophore and valency theories, A., I, 348. Influence of substituents on the ultraviolet absorption of benzene chromophores conjugated with other chromo-

phores, A., I, 494. Flaschka, H., and Skrabal, R., ultraviolet absorption of binary liquid

mixtures. XII., A., I, 355. and Fruhwirth, O., ultra-violet absorption of binary liquid mixtures. XI. Ultra-violet absorption and orientation polarisation of the binary systems acetone-benzene and nitromethanecarbon tetrachloride, A., I, 295.

and Langer, T., ultra-violet absorption of binary liquid mixtures. X. System benzene-heptane, A., I, 217.

Pestemer, M., and Mayer-Pitsch, E., influence of substituents on ultra-violet absorption of doubly conjugated benzene chromophores, A., I, 280.

and Schmidt, Gerhard, polarisation photometer for visual determination of differences in blackening and its application in photographic spectra photometry, A., I, 152.

See also Bilger, F.

Pestov, N. E., magnesium sulphate fertilisers from rocks containing magnesium silicates, B., 166. Cementation in storage of fertiliser salts, B., 707. Magnesium silicophosphate, B., 904. and Glazova, T. V., hygroscopicity of

fertilisers, B., 71.

Peter, C., soil conditioners, (P.), B., 1391. Peter, H., effect of artificial acidification with hydrochloric and sulphuric acids on conservation of green clover, B., 1265.

Peterburgski, A. V., soil reaction as factor in plant growth, B., 377.
Pêterfi, T., and Kojima, H., effect of micrurgical treatment on the resting nucleus of plant cells. I. Puncturing experiments. II. Injection experiments, A., III, 283.

Peterkin, A. G., jun., and Atlantic Refining Co., treatment of hydrocarbon oils, (P.),

B., 323.

Peterman, E. A., bilirubin, (P.), B., 1408. Peterman, F. B., and Internat. Lead Refining Co., [copper-]lead alloys, (P.), B., 800. Peterman, M. G., and Epstein, Ely, prevention of rickets with a cod-liver oil

concentrate in milk, A., III, 406. Peters, A. T. See Rowe, F. M.

Peters, B. A., and Cunningham, R. N., vitamin B_1 and diphtheria, A., III, 205. Peters, B. G., vinegar eclworm in tan liquor, B., 704.

Peters, F., Krieg, W., and Pflug, H., toximetric testing of coal-tar wood-impreg-nating oils by the wood-block method, B., 556.

Peters, F.J., testing paints and varnishes for army supplies, B., 62. Paints for [German] army stores and their testing, B., 155.

Peters, F. N., jun., and Musher, S., oat flour as antioxidant, B., 385.

Peters, F. P., thermionic vacuum-tube electrode materials, B., 801.

Peters, G. A., and Martin, H. E., ascorbic acid in gastric juice, A., III, 282.

Peters, H. See Schumb, W. C. Peters, J. P. See Eisenman, A. J.

Peters, K., corresponding states of gas adsorption, A., I, 561. Quantitative separation of neon and helium, A., I, 574. Supervision of gas production in coal mines, B., 403. Adaptable arrangement of vacuum pumps, B., 854. Technical analysis of [mixed] inert gases, B., 1200. and Lohmar, W., relation of sorption of

gases to their molecular structure, A., I, 561. Quantitative separation of isotopes of hydrogen by fractional desorption, A., I, 574. Quantitative separation and purification of hydrocarbons by desorption in vacuo, B., 212. Complete analysis of technical hydrocarbon gases by aid of the de-

sorption method, B., 315. and Winzer, K., thermal decomposition of cresol on a glowing wire, A., II, 454. Cracking of paraffin oil on glowing graphite, B., 107. Addition of

ethylene to coal, B., 1152.

Peters, O. See Helferich, B., and Hilpert, R. S.

Peters, R. A., vitamin-B complex, A., III, Pyruvic acid oxidation in brain. I. Vitamin- B_1 and the pyruvate oxidase in pigeon's brain, A., III, 76. Contribution of vitamin- B_1 to the metabolism of brain, A., III, 325. Determination of vitamin- B_1 , A., III,

See also Clark, A. J., and McGowan, G. K. Peters, W. H., apparatus for carrying out synthesis of resins from glycerol and phthalic acid, (P.), B., 591.

Peters Cartridge Co. See Jacobs, G. H. Petersdorff, H. J. von. Sco Steinkopf, W. Petersen, A., recording electrochemical meter for determining oxygen [in boiler

feed-water], B., 1229.

Petersen, F. H. See Jespersen, J.

Petersen, G. M., instructions for printing ceramic decalcomania, B., 38.

Petersen, H. W. See Olin, H. L. Petersen, M. See Welo, L.

Petersen, N. F. See Kiesselbach, T. A. Petersen, R., and Ellett, A., quenching and depolarising collisions and polarisation of resonance radiation in a mag-

nctic field, A., I, 540.

Petersen, R. P. Sec Edwards, H. W.

Petersen, R. S., Andrews, C. W., and Brassert-Tidewater Development Corp., coking of hydrocarbons, (P.), B., 323.

and Brassert-Tidewater Development Corp., apparatus for coking of bituminous or asphaltic liquids, (P.), B., 323.

See also Andrews, C. W.

Petersen, W., settling and dewatering of fine-grained ore-dressing products, B., 573. Alteration of the plasticity of kaolins, B., 1050. Effect of dispersion of water-insoluble flotation agents, B., 1354.

Petersen, W. E. See Brown, W. R. Peterson, D. H., Gallagher, T. F., and Koch, F. C., effect of acid-hydrolysis on the yield of androgenic and cestrogenic activities from human urine, A., III, 320. Peterson, E. L., and Nordheim, L. W.,

resistance of univalent metals, A., I, 229.

Peterson, L. Sec Hare, W. A. Peterson, O. N., metallurgical control in automobile manufacture, B., 1351.

Peterson, R. G. See Osgood, G. H. Petersen, W. H., Bird, H. R., and Beeson, W. M., chemical changes in the making of A.I.V. silage and nutritive qualities of milk produced therefrom, B., 1403.

See also Berger, J., Conner, H.A., Johnson, M. J., Langlykke, A. F., Olson, F. R., Pavcek, P. L., Snell, E. E., Tatum, E. L., Wood, H. G., and Woolley, D. W.

Peterson, W. J., Hughes, J. S., and Freeman, H. F., determination of carotene in forage; modification of the Guilbert method, B., 616.

See also Atkeson, F. W., and Raiford,

Petherbridge, F. R., and Mellor, J. E. M., life history and control of cabbage aphis, Brevicoryne brassicæ, L., B., 378.

Petin, $N. \tilde{N}$., kinetics of separation of salts from their supersaturated solutions, A., I, 367.

Podrezov, V. I., and Chigerovitsch, M. I., stability of disperse three-phase systems. I. Stabilisation of emulsoid suspensions of clay, bitumen, and aqueous electrolytes, B., 1056. Petin, N. N. Seo also Nemkova, O. G., Nesterova, V. I., Ordinskaja, E. S., and Suchich, V. A.

Petit, C., effect of expansion in a coke-oven battery, B., 199.

Petit, G., mechanism of the reaction between sulphuric acid and mono- and di-methylarsinic acids, A., II, 449.

Petit, J. Sce Rimattei, F. Petit, P., clearing of wort, B., 606. Clarification and stirring [in brewing], B.,

606. Colour of wort and beer, B., 606. Yeast haze [in beer], B., 719. and Dieterlen, Baudelot cooler, B., 1395.

Petit, R. Sec De Brouckère, L.

Petitpas, (Mlle.) G. See Bouchonnet, A. Petraev, I., causes of increase in acidity of oils during washing after neutralisation, B., 1081.

Petrasch, A. A. See Pamfilov, A. V.
Petrascheck, W. E., structure of tectonic coals, A., I, 156.
Petre, A. W. Sco Bailey, C. F.

Petrenko, B. G. See Laschko, N. F.

Petrenko, G. I., and Tischtschenko, F. E.,

hardness of aluminium-silver alloys, B.,

Petrenko, I. G., determination of reactivity of coke, B., 311.

See also Neimark, M. E.

Petriaev, I., use of benzene in determining acidity of oils, B., 366.

Petrick, A. J., South African oil shales, B., 406. Hydrogenation of Ermelo oil shales and shale oils, B., 750.

Petrie, A. H. K. See Ballard, L. A. T. Petrjanov, I. See Fuchs, N.

Petroleum Conversion Corporation. Sec Sachs, A. P.

 $\begin{array}{cccc} {\bf Petroleum} & {\bf Processes} & {\bf Corporation.} \\ {\bf Tears,} & C. & F. \end{array}$

Petroleum Rectifying Co. of California. See Eddy, H. C., Fisher, H. F., Hanson, G. B., Kiech, C. F., McDonald, L. E., Pettefer, R. L., Roberts, C. H. M., St. Hill, T. N., Woelflin, W., and Worthington, J. T.

Petrosjan, E., and Ponomarjev, W., use of castor cake for pig-feeding, B., 390.

Petrov, A. A., and Saposhnikova, A. F., anomalous elimination of halogens from certain tri- and tetra-halides, A., II,

Petrov, A. D., and Andreev, D. N., action of magnesium sec .- propyl chloride, sec.-butyl bromide, and sec.-amyl chloride on ethyl octoate, A., II,

and Malinovski, M. S., action of magnesium tert.-butyl chloride and magnesium butyl bromide on othyl isovalerate and butyrate, A., II, 324.

and Tschelzova, M. A., catalytic isomerisation of n-hexene and octene in presence of zinc chloride and phosphoric acid, A., II, 269.

Petrov, B., and Ormont, B., higher oxygen compounds of iron. I., A., I, 259.

Petrov, D. A., composition of the quaternary phase in the system Al-Cu-Mg-Si, A., I, 508.

See also Levina, R.J.

Petrov, G., and Kruglaja, N. B., use of hydroxynaphthenic acids in production of plastic compounds from phenolaldehyde resins, B., 698.

and Lukavenko, T., preparation of novolacs and resols from phenol and solid polymerides of formaldehyde, B.,

1370:

Petrov, G., and Pitschugina, A. A., condensation of phenol and cresol with acetaldehyde to form plastic compounds and insulating materials, B.,

and Pogrebetzki, E., preparation of plastics from dimethylolurea, B., 1369.

and Smirnova, S., control of preparation of novolac and resol resins by bromination methods, B., 1086.

and Ustinov, S., thermal treatment of resins and plastics as a test method, B., 1084.

Sco also Losev, I. P

Petrov, I. T., and Pasinski, A. G., determining the isoelectric point. IL Isoelectric points of different sorts of gelatin, B., 375.

Petrov, K. See Zeide, O.

Petrov, M. E., detection of molybdenum in steel without taking a sample, B.,

Petrov, N. A., and Lazareva, M. V., recovery of potassium chloride by electrolysis with silver electrodes, B., 435.

Petrov, O. D. Seo Merlis, M. N. Petrov, V. A., steroids and related compounds. I. Isomeric cholestenediols, A., II, 417.

Petrova, A. P. See Archarov, V. I.
Petrova, E. M. See Nikolaev, V. I.
Petrova, N. N., influence of various electrolytes on physical and chemical properties of sodium oleate, B., 364.

Petrovitschev, underground gasification of coal in the Lenin-Kuznetzk district (Kuzbas), B., 639.

Petrovski, J., Schulshenko, K., and Biloschita, H., comparison of tinetures

made with 70 and 45% alcohol, B., 840. Petrucci, G., apparatus for investigating absorption of electric waves on passage through matter, A., I, 100.

Pettefer, R. L., and Petroleum Rectifying Co. of California, electric treater with diverging stream and method [for oil

emulsions], (P.), B., 19.
Pettet, A. E. J., chemical examination of wood-smoke, B., 1152.

See also Morgan, (Sir) G. T.

Pettett, L. J., Brown, J. R., and Mills, H. N., fertiliser bag, (P.), B., 715.

Pettigrew, J. B. See Hunter, Andrew.

Pettinger, A. H., influence of metals in bleaching, B., 660. Milk made digestible by softening, B., 1121.

Petty, E., and Cooke, M. B., de-asphalting and dewaxing of hydrocarbon oils, (P.), B., I012.

Schutt, H. C., and Gyro Process Co., conversion of hydrocarbon oils, (P.), B., 646.

Petunnikov, G., occurrence of bauxite in

Montenegro, A., I, 154. Petzholdt, J. S. See Horn, II.

Petzold, F. See Heinrich, F.
Pevere, E. F. See Texas Co.
Pevni, N. I. See Adadurov, I. E. Pevzner, E. B. See Bergman, A. G.

Pevzner, L. E. See Shigadlo, A. V. Pew, A. E., jun., and Sun Oil Co., apparatus for chemically treating topped crude oil, (P.), B., 521.

Thomas, Henry, and Sun Oil Co., separation of gasoline from cracked mineral oil, (P.), B., 413.

Pexton, S. See Gas Light & Coke Co. Peyches, I., rotatory power and structure of electrolytic solutions, A., I, 78.

Peyer, W., determination of essential oils in camomile, B., 1134.

and Grnschwitz, K. H., quality and composition of German (especially Silcsian) bread, with special reference to digestibility of the nitrogen constituents in vitro, B., 179.

Peyinghaus, W. See under Eisen & Stahlwerk W. Peyinghaus.

Peynaud, E., determination of volatile acidity of sulphited wines, B., 1116.

See also Espil, L., and Ribereau-Gayon, J. Peyre, E., and Moricourt, H., action of ozonised oxygen on hæmolytic properties of sera, A., III, 293.

Peyronel, G., structure of uranium pyrophosphate, UP₂O₇, A., I, 118. Crystallisation of silica in NaPO3, A., I, 319.

Peyrot, P., absolute measurement of light diffused by liquid benzene, A., I, II3. See also Canals, E.

Pezold, E. von, determination of calorific value of kukersite [Estonian shale] and its carbonisation or combustion residues, B., 637.

Pfaff, C., and Pfützer, G., influence of nutrition on carotene and ascorbic acid contents of vegetables and fodder plants, B., 492.

Pfaffenberger, J. See Dahl, O. Pfahler, A. See Enders, C.

Pfanhauser, J., and Jacewiczówna, J., photometric analysis. I. Determination of molybdenum in steel. II. Determination of copper in pure metals and steels, B., 564, 1215.

Pfannenstiel, W., and Jusatz, H.J., growthpromoting value of wholemeal bread,

Pfannmuller, J. See Wallerstein, L. Pfanstiehl, C. See Pfanstiehl Chem. Co. Pfanstiehl Chemical Co., and Pfanstiehl, C., welding pen tips to pen nibs, (P.), B., 148. Welding of metallic tips to metallic bases, such as pen nibs or other metal

articles. (P.), B., 1227.
Pfanstiel, R. Sco Grasselli Chem. Co.
Pfau, A. S. Sce Plattner, P. A., and Susz, B.

Pfau, G. M., Bolin, D. C., Zublin, E. W., and Texas Pacific Coal & Oil Co., apparatus for mixing fluid masses, (P.), B., 996.

Pruitt, H. H., and Texas Pacific Coal & Oil Co., vapour-phase [hydrocarbon-] cracking apparatus, (P.), B., 19.

and Texas Pacific Coal & Oil Co., cracking [of hydrocarbon oils] and apparatus [therefor], (P.), B., 521. Pfau, K. O. See Bender, C. B.

Pfefferkorn, K., reactions between body and glaze on earthonware, B., 1049.

and Boden, J., precipitation of alumina in the Kallauner-Matejka method of analysis, A., I, 328.

Pfeiffer, C. A., hypophyseal gonadotropic hormones and luteinisation phenomenon in the rat, A., III, 229. Factors inin the rat, A., III, 229. fluencing vitalisation of the ovarian graft and production of sex hormones in the male rat, A., III, 402.

Pfeiffer, G., calcium and vitamin therapy, A., III, 327.

Pfeiffer, H., evidence for linear units within protoplasm, A., III, 57. Determination of molecular energy of protoplasm. IV. Determining surface tension of the naked protoplast against a liquid medium, A., III, 234. Physical analysis of the plasmolytic fragmentation of elongated protoplasts, A., III, 283.

Pfeiffer, J. P., advantages and disadvantages of ethyl alcohol-petrol mixtures for motor engines, B., 867.

and Blijdorp, P. A., use of mineral oil products for control of plant diseases, B., 958.

Pfeiffer, N. E., root production on application of indolylbutyric acid to Cissus

actical roots, A., III, 444.

leiffer, P. [with Böttcher, H.,
Prätorius, W., and Kwan, L. M.],
betaine-like complex salts, A., II, Pfeiffer,

and Böttcher, H., chloro-acid betaines, A., II, 172. Behaviour of open and cyclic ketones towards nitroso-com-

pounds, A., II, 197. and Christeleit, W., determination of configuration of natural a-amino-acids, A., II, 138. Configuration of glucosamine; steric relations between a-amino- and a-hydroxy-acids, A., II,

and Diebold, A., a-hydroxyisobutyric acids, A., II, 149. and Heinrich, E, synthesis of 3-hydroxy-

chromanone-3-acetie acid, A., II, 29. and Loewe, W., demethylations and demethyleneations, A., II, 103.

and Werner, H., constitution of the copper salts of aspartic and glutamic acids, A., II, 233.

Pfeiffer, R., ceramic materials in the chemical industry, B., 1339.

Pfeifle, H. W. Sce Rowe, L. W. Pfeil, E. See Meerwein, H.

Pfeil, L. B., nickel and nickel alloys, (P.), B., 1227.

See also Griffiths, W. T., and Mond Nickel Co.

Pfeilring-Werke Akt.-Ges., androsterones, (P.), B., 288. Production of androstenediols, (P.), B., 1408.

Pfeilsticker, K., breaking are with high-frequency ignition, A., I, 535. Pfeningberger, R. See Hernler, F.

Pfiffner, J. J. See Wintersteiner, O. Pfirmann, T. W., hydrogenation of

carbonaccous materials, (P.), B., 872. and Uhde Ingenieur-Buro, F., granulated materials, (P.), B., 1146.

Pfirschke, J. See Voss, W. Pfizer & Co., O. See Pasternack, R. Pflier, P. M., shrinkage forces in concrete, B., 1344.

Pflug, H. Soo Peters, F.
Pfluke, F. J., Sedlachek, A. C., and Huyck, A. B., coke strength as affected by coke breeze admixture to coal, B.,

Pfrengle, O., recovery of bitumen from mineral mixtures, B., 748.

Pfretzschner, H., Götz, M., and Waidt, E., beech-wood cellulose, B., 1035. See also Brecht, W.

Pfützer, G. Sco Pfaff, C.

Pfundt, R., production of bakers' yeast by the aëration method. II. Effect of duration of formentation, aëration, initial amount of yeast, dilution, and pn control on yield and quality of the yeast, B., 1258.

Seo also Braun, W., and Reindel, F. Phalnikar, N. L., and Nargund, K. S., phenylglutaric acids. I. $\beta\beta$ -Diphenylglutaric acid, A., II, 195.

Phansalkar, S. L., improved burette, A., I, 635.

Pharma Chemical Corporation. Seo Markush, E. A.

Phatak, N. M., and Emerson, George A., toxicity and local anæsthetic activity of alkyl esters of 2-furoic acid, A., III, 25. and Leake, C. D., bacteriostatic action of certain furan derivatives, A., III, 37.

See also Greenberg, $L.\ D.$ Phelan, $J.\ F.$, effects of proposed [United States] new bacteriological techniques,

B., 1124.

Phelps, C. W. See Lichty, L. C. Phelps, E. B. See Faber, H. A.

Phelps, F. P. See Bates, F. Phelps, S. M., and Marbaker, E. E., new ceramic table tops, B., 671.

Phelps Dodge Corporation. See Fowler, M.G.

Phemister, T. C., problems of the Sudbury [nickel] irruptive, A., I, 334.

Philadelphia Club, primary reference mineral spirits method for standardising kauri-butanol values, B., 155. Stability of red pigments, B., 156.

Philadelphia Quartz Co. See Cleveland, T.K.Philip, T. B., development of spray drying, B., 1.

Philipon, H., ash-melting gas producers,

(P.), B., 1300.

Philipp, C., chronological development of utilisation of [rubber] latex, B., 948. and Müller, Siegfried, monoximes of aromatic-aliphatic a-diketones; new a-diketones and their dioximes, A., II, 249.

Philipp, H. See Mark, H. Philipp, K. See Erbacher, O.

Philippe, E., and Henzi, M., examination and evaluation of macaroni, etc., B., 79. Philippi, E., Hendgen, F., and Hernler, F., attempted synthesis of gem-substituted 6:6-dihydrouracils, A., II, 77.

Philippi, G. J., influence of electrolyte content of the medium on properties of completely spread protein films, A., I, 235. Spreading and expansion phenomena of unimolecular layers [of protein], A., I, 563.

Philippoff, W., viscosity problem in organic colloids; influence of solvent and temperature on viscosity of cellulose nitrate solutions, A., I, 78. Experiments with mixtures and influence of heterodispersivity on the flow curve of highly polymerised organic compounds, A., I, 361. Capillary viscosimeters, A., I, 428. Comparative viscosimetrio investigations with solutions of crêpe rubber and Buna [synthetic_rubber], B., 1244.

and Hess, K., viscosimetric behaviour of sodium oleate solutions, A., I, 514.

Sec also Hess, K.

Phillips, A., and Meyer, W. R., crystal structure of copper electrodeposits. I., B., 452.

and Weldon, M. J., contributory effects of furnace atmospheres on the grain size of molybdenum high-speed steel, B., 792.

See also Brick, R. M.

Phillips, A. J., creep tests on lead and lead

alloys, B., 572. Swartz, C. E., and Amer. Smelting & Refining Co., melting and handling of cadmium and its alloys, (P.), B., 933. See also Betterton, J. O.

Phillips, C. D. See Adams, O. P. Phillips, C. E. See Schofield, T. H. Phillips, C. J., Raman spectra and latent heat of fusion of non-associated substances, A., 1, 167.

Phillips, Charles J. See Corning Glass Works.

Phillips, F. J. See Curtis, G. M.Phillips, G. P., impact-resistance and other physical properties of alloy grey cast

irons, B., 679. Phillips, H. See Gerrard, W., and Kenyon,

Phillips, J., and Lowy, A., titration of aromatic amines with nitrous acid, A., II. 478. Electrolytic reduction of aromatic trinitro-compounds to their respective triamines, B., 459.

Phillips, J.J., ammonium phosphates, (P.), B., 908.

Phillips, L. W. Sco Kruger, P. G. Phillips, M. See Feenberg, E.

Phillips, Max, and Goss, M. J., simultaneous determination of methoxyl and ethoxyl in organic substances, A., II, 359. Phillips, N., moulding or similar mixtures

[for wall plugs], (P.), B., 142.

Phillips, N. W. F. See Steacie, E. W. R.

Phillips, P. H., effects of sodium fluoride administration on basal metabolic rate of experimental animals, A., III, 263.

Phillips, S. See Jones, D. B.

Phillips Petroleum Co., natural-gas con-

version, (P.), B., 754. See also Drennan, H. E., Frey, F. E., Guyer, J. A., Reid, J. A., Riney, A. H., Schulze, W. A., and Youker, M. P.

Phillipson, G. A., coal-tar distillation, B., 313.

See also Koppers Coke Oven Co.

Phillis, E., and Mason, T. G., transport in the cotton plant. VI. Inter-change between tissues of the corolla, A., III, 46. Effects of light and of oxygen on uptake of sugar by the foliage leaf, A., III, 285. Concentration of solutes in vacuolar and cytoplasmic saps, A., III, 441.

Philpot, F. J., oxidation of tyramine in

the liver, A., III, 310. and Philpot, J. St. L., colorimetric determination of carbonic anhydrase, A., III, 66.

Philpot, J. St. L. See Philpot, F. J. Philpott, M. W., artificial rubber, B., 1378. Phily, C. J. F. See under De Phily, F.Phipard, E. H. F. See Rose, M. S.

Phipers, R. F. See Cahn, R. S. Phipps, H. E., lamp for analytical balance, A., I, 330.

Phragmén, G., equilibrium between carbon and oxygen in molten steel and in a gas in equilibrium with the steel, B., 1060.

Pi-Suñer, A., significance of C₃ substances in urine, A., III, 57.

Piana, A., blood-guanidine in experimental beriberi, A., III, 231.

Piankov, V. A., oxidation of halides of alkali metals by molecular oxygen, A., I, 91. Inaccuracies in microiodometry, A., I, 96. Absorption of mercury vapour by iodised charcoal. I. and II., A., I, 129, 234. and Loevski, M. L., determination of

small amounts of mercury in ores, B.,

Piantanida, E., changes in the steel of guns eroded by firing, B., 396.

Piantanida, M. See Prelog, V. Piatnitzki, A. I., and Timofeev, P. V., velocity distribution of photo-electrons on composite casium electrodes, A., I, 114.

See also Timofeev, P. V. Piaw, C. S. See Zé, N. T. Pic, A. See Meyer, Kurt.

Picado, C., and Rotter, W., anti-endocrine gland precipitins and longevity in vertebrates, A., III, 55.

Picard, J. See De Jong, S. Picard, R. See Pierrat, P.

Piccard, A., and Stahel, E., simultaneity of absorption of the primary quantum and of emission of secondary rays in the Compton and photo-electric effects, A., I, 273.

Piccardi, G., presence of molecular hydrogen in sun-spots. I. and II., A., I, 158, 207. Spectrum of praseodymium oxide in the vapour state, A., I, 392. Molecular spectra and spectroscopic analysis. V. Detection of gadolinium. VI. Detection of samarium, A., I, 532.

Piccardo, C., system for prevention of scale formation and for continuous automatic discharge of mud from steam boilers and heaters of liquids, (P.), B., 1145.

Piceinini, M., analysis of carotene, A., Ill, 82. Pharmacology of carotene, A.,

Pichunova, N. A. See Sakostschikov, A. Pick, E., coking of solid bituminous fuels, such as bituminous coals, (P.), B., 1300.

Pickard, C. E. See Pancreol, Ltd. Pickard, J. A., filters of edge-filtration type, (P.), B., 1147.

Pickel, F. D. See Cerecedo, L. R.
Picken, L. See Meyer, K. H., and

Misch, L. Pickering, W. H., secondary particles from

penetrating component of the cosmic radiation, A., I, 277.

Pickett, L. W., X-ray study of substituted diphenyls, A., 1, 18.

Walter, G. F., and France, H., ultra-violet absorption spectra of substituted diphenyls, A., I, 8.

Pickett, W. F., relation between internal structure and photosynthetic behaviour of apple leaves, B., 957. Control of frog-eyo of apple leaves, 1932, B., 1389.

Pickford, G. E., sealed-in glass microelectrode, A., I, 480.

Pickford, M., inhibition of water diuresis by pituitary (posterior lobe) extract and its relation to the water load of the body,

A., III, 150. Pickford, R. J. See Pickford, Holland & Co.

Pickford, Holland & Co., Ltd., and Pickford, R. J., bond for silica bricks, etc., (P.),

Pickholz, S. See Hamburg, M.

Piddlesden, J. H., centrifugal concentration of [rubber] latex, B., 948. Drying of rubber, B., 948.

See also Moore, A., and Rhodes, E. Pidgeon, L. M., carbon black. III. Channel process; production from pyrolysis wasto gases. IV. Channel process; wasto gases. IV. Channel process; effect of draught control and channel height on rubber reinforcement, sorption, and volatile content, B., 745.

Piekara, A., positive electrical saturation, A., 1, 347. Theory of effect of magnetic field on dielectric constant of diamagnetic gases and liquids. I.— III., A., I, 396. Electrical saturation in dilute solutions of nitrobenzene, A., I, 499.

and Pickara, B., electric saturation in pure liquids and their mixtures, A. I. 12. Electrical estimation 12. Electrical saturation and critical solution point, A., I, 23.

Piekara, B. See Piekara, A.

Pickielny, W., oxidation of sulphur vapour

at low pressures, A., I, 470.

Pien, J., colouring of [Dutch] cheese rind;
reasons for authorising Sudan IV,
B., 181. Is electrical deacidification of milk fraudulent? B., 833. Commercial methods for determining fat in cheese, B., 834.

Baisse, J., and Martin, R., determination

of diacetyl in butter, B., 1261.
Pieper, A. F., Pieper, O. H., and Meitzler, C. R., sterilisers, (P.), B., 741.

Pieper, L., new refractory materials from German serpentines, B., 1052. Pieper, O. H. See Pieper, A. F.

Pier, M., coal hydrogenation; comparison of hydrogenation products of coal and oil, B., 514. Solid stationary catalyst in the [continuous] pressure hydrogenation [of middle oils, etc.], B., 1297. See also Standard-I. G. Co.

Pierce, H. F., metabolism chamber which automatically maintains a constant partial pressure of oxygen, A., III, 465.

Pierce, J. A., capillary, non-penetrating, micro-quinhydrone electrode, A., III,

See also Montgomery, H.

Pierce, R. B., Trusty, A. W., and Louisiana Oil Refining Corp., treatment of hydrocarbon oils, (P.), B., 1302.

Pierce, R. C., and Nat. Standard Co., filter,

(P.), B., 304.
Pierce, W. C., Fourier analysis of X-ray scattering from polyatomic liquids, A., I, 552.

Olson, C. M., and MacMillan, D. P., tube for the production of monochromatic fluorescent X-rays, A., I,

See also Olson, C. M.

Pieris, O. H. F., concrete bases for retort stands, A., I, 100. Pierls, R. See Ellis, C. D. Pierotti, G., and Stewart, T. D., addition

of magnesium n-butyl bromide to acetone, A., II, 483. Pierrart, G. See Paget, M.

Pierrat, P., Picard, R., and Du Pont Rayon Co., [artificial] thread, (P.), B., 1192.

Pierron, A. See Simonin, P Pierron, P. See Lemarchands, M.

Piersol, R. J., laminated chromium plating, B., 1069. Influence of bath temperature on chromium-[plate] hardness, B., 1358. Influence of borate radical on chromium-[plate] hardness, B., 1358. Laminated chromium deposits, B., 1358.

Pierson, E., vitamin- B_1 and $-B_2$ content of S. Dakota tailless lamb (muscle, liver, pancreas, thymus) and C content of liver, B., 1401. Vitamin-C content of

canned spinach, B., 1401.

Pierson, G. G., separation and recovery of gold, platinum, palladium, selenium, tellurium, and arsenic by means of mercurous salts, (P.), B., 933.

and Perkins Glue Co., adhesive composi-

tion, (P.), B., 162.
Pietenpol, W. B., surface tension of molten glass, B., 344.

and Keller, K. S., gassing of lead plate storage batteries during charge and

discharge, B., 254.
Pieters, H. A. J., treatment of iron structures with phosphoric acid, B., 918. Process used in the [Dutch] State Mines for the so-called "wet purification " [of coal gas], B., 1155.

Pieters, H.A.J., Staatsmijnen-Otto process for removal of hydrogen sulphide from gases, B., 1295.

[with Penners, K., and Hovers, J.], Staatsmijnen-Otto process for production of alkali ferrocyanide from coal-

distillation gases, B., 1295.

Pietrusky, C., technical applications of molasses in the United States, B., 961. Simplified distillation of spirits, B., 1258. Pietsch, G. See Schwarz, Robert.

See Fleischer, R. Pietsch, H. Piettre, M. See Achard, C.

Piety, R. G., ferromagnetic anisotropy at various temperatures of iron crystals,

A., I, 120. Pietz, J. See Mothes, K. Piezczek, S. Seo Swientoslawski, W.

Pigeaud, M. L. See Cheftel, H. Piggott, H. A. See Imperial Chem. Indus-

Pigman, W. W., and Isbell, H.S., β -d-talese and d-talose acetates and ortho-esters, A., II, 444.

See also Isbell, H. S.

Pigott, E. C., rapid determination of aluminium in complex irons and steels, B., 47.
Pigulevski, G. V., Kanetzkaja, E. T., and
Platonova, M. A., isomerisation of linalool under influence of active silic-

ate (floridin), A., II, 295. and Rokitianski, I. V., isomerisation of linoleic acid. II., A., II, 320.

Pihlstrand, F., absorption and evolution of hydrogen with iron at high temperatures, B., 1059.

Pijanowski, E., butter acidity, B., 180. Applicability of Polish amyl alcohol to butyrometry, B., 584. Comparison of three methods for determining fat in cheese, B., 834.

Supińska, J., and Matuszewski, T., characteristic features of milk of cows suffering from mastitis, A., III, 379.

See also Matuszewski, T., and Supińska, J.

Pijoan, M., antiscorbutic properties of a salt of iron and ascorbic acid, A., III, 440.

and Quigley, T. B., blood-inorganic phosphates in carbohydrate metabolism, A., III, 85.

Townsend, S. R., and Wilson, A., determination of reduced ascorbic acid in blood, A., III, 155.

and Zollinger, R., carbohydrate metabolism following irradiation of the pituitary, A., III, 346.

Pike, H. V. See Garner, W. E.

Pike, R. J. See Cheesman, G. H.

Piland, J. R. See Willis, L. G.

Pilat, E. N., analysis of lubricating oils by Waterman's method, B., 871.

Pilat, S. von, and Turkiewicz, M., sulphonaphthenic acids, A., II, 489.

See also Müller, Jacob. Pilati, L., chemico-toxological detection of thymol, A., III, 351. Insoluble ferro-cyanides and putrefaction of organic matter, A., III, 485.

Pilch, K. See Suess, H. Pilcher, C. See Mason, M. F. Pilcher, J. F. See Bodansky, M.

Pilcher, J. M., and Vilbrandt, F. C., humid ageing of fly-ash brick, B., 556.

Pile Lumina Belge, Soc. Anon. See

Schidlo, O. Pilipenko, A. T. See Tananaev, N. A. Pilipenko, P. P., structure and chemical composition of glauconite, A., I, 585.

Pilkington, G. E. See Winterbottom Book Cloth Co.

Pilkington Brothers, Ltd., and Clitherow, W. B., apparatus [suspending means]

for tempering glass, (P.), B., 551.

and Forbes, L. J. B., apparatus for tempering glass, (P.), B., 241. Tempering of plates of glass, (P.), B., 241.

Tempering of glass sheets, (P.), B., 551. and Gaskell, J., annealing apparatus for drawn glass, (P.), B., 1206. and Wood, A. R., refractory bodies and materials, (P.), B., 551, 1207.

Pillai, R. K. See Needham, D. M. Pillat, A. See Mu, J. W.

Pillow, M. Y., and Luxford, R. F., structure, occurrence, and properties of compression wood, B., 786

Pillsbury, D. M., and Kulcher, G. V.. relation of experimental skin infection to carbohydrate metabolism; effect of hypertonic glucose and sodium chloride solutions injected intraperitoneally, A., III, 23.

Pilnik, R. S. See Sirokomski, V. S.

Pim, F. B. See Birch, S. F. Pin, K. L., Kao, S. Y., and Pang, L. T., hyperglycemic action of Rehmannia glutinosa, Alisma plantago, Scrofularia Oldhami, Atractylis ovata, and Lycium chinense, A., III, 95.

Piña de Rubies, S., diffusion of gold injected into the body of the guinea-pig, A., III, 424.

See also Aguado, J. G.

Pinault, R. W., reducing redyes on rayon crêpes, B., 661.

Pincherle, L., origin of satellite lines in X-ray spectra, $reve{\mathrm{A.}}$, $reve{\mathrm{I}}$, 487.

Pinck, L. A., and Hilbert, G. E., synthesis of phenanthridine derivatives by an application of the Stieglitz rearrangement, A., II, 116.

Pinckard, J. A., spraying for control of apple fire-blight, B., 1106.

Pinckard, P. M., paired flue and regenerative by-product coke oven, (P.), B., 1158.

Pincus, G., Wheeler, G., Young, G., and Zahl, P. A., colorimetric determination of urinary cestrin, A., III, 41.

and Zahl, P. A., biogenesis of primary sex hormones. I. Fate of estrins injected into the rabbit, A., III, 361.

Pincus, P., enamel protein, A., III, 56. Local factors influencing dental caries: study of organic matter associated with enamel, A., III, 123.

Pincus, S., and Stern, A. C., air pollution (New York City), B., 624.

Pindrik, B. E. See Tereschtschenko, A. V. Pine, P. R., and Harshaw Chem. Co., depositing metals [nickel] electrolytic-ally, (P.), B., 253. Electrodeposition [of nickel], (P.), B., 253.

Pine-Felt Corporation. See Ratliff, A. T. Pine Kindler Corporation. See Chaney, F. V.

Pinel, A., [rapid] spinning of artificial threads from antimonial viscose, (P.), B., 1192

Pinelli, V., gas masks, (P.), B., 626. Pines, B. J. See Kainarski, I. S. Pines, H. See Ipatiev, V. N.

Ping, K., and Hsiung, S. Y., modification of Pieter's method for prediction of coking properties of coal, B, 199.

Pings, W. B. See Smith, L. I. Pinkel, I. I. See Hirst, L. L.

Pinkernelle, W. See Brann, J. von.

Pinkus, A., and Haugen, M., solubility of silver chloride in aqueous solutions of potassium and sodium chlorides, A., I, 128.

and Timmermans, (Mlle.) A. M., solubility of silver chloride in aqueous solutions of hydrochloric acid and alkaline chlorides, A., I, 298.

Pinnell, C. R. See Warne & Co., W. Pinner, M., mechanism of healing in collapse therapy, A., III, 258.

Pinnow, P. See Braune, H. Pinotti, O., electrophoresis of [blood-] platelets, A., III, 371. See also Cardin, A.

Pinoy, P. E., and Fabiani, G., influence of coagulation on sensitising action of an antigen, A., III, I15.

Pinsker, F., hydrogenating fish and whale oils, B., 366.

Pinsker, S., testing of materials by the high-- velocity electron diffraction method, A., I, 581.

and Tatarinova, L., electron diffraction analysis of organic films, A., I, 18.

Pinsl, H., simultaneous photometric determination of manganese, silicon, and chromium, A., I, 149. Photometric determination of titanium and vanadium in steel and iron, B., 246.

Pinte, J. See Toussaint, R.

Pinter, T., proof of the theorem of corresponding states through the straight mean

line equation, A., I, 506.

Piontelli, R., measurement of affinity and expression for maximum work, A., I, 242. Electrochemical behaviour metals which furnish cations of different valency. I., A., I, 245. See also Natta, G.

Piore, E. R., thin film field emission, A., I, 437.

Piotrovski, I., effect [on water] of filtration through rapid filters on the operation of slow filters, B., 848.

Piper, C. S., determination of sodium and potassium, A., I, 261. Boron status of South Australian apples, B., 273.

Piper, J. D., and Kerstein, N. A., enclosed apparatus for laboratory crystallisations, A., I, 536.

Kerstein, N. A., and Fleiger, A. G., oil-impregnated paper; sorption of organic acids and its relation to power factor, B., I188.

Piper, S. H., use of X-rays in identification and determination of mixtures of aliphatic compounds, A., II, 131.

See also Chibnall, A. C., and Francis, F. Pipik, O., and Mezhebovskaja, E., influence of peroxides on gum formation in cracked gasolines, B., 204.

Pipper, A. L. See Radio Corp. of America. Pique, J. J., storage of food for emergency

of war, B., 977.

Pirani, M., and Rompe, R., determination of the temperature of a gas, B., 197. See also Gen. Electric Co., and Guertler, W.

Piratzky, W., and Wiecha, G., change in viscosity of malt wort by enzyme action, B., 719. Relationships between properties of brewing barley and its corn size, B., 1115.

Pirch, E. See Gorbach, G. Pirct, E. L. See Fromageot, C., and Halvorson, H. O.

Piris, A., metabolism of the filter-passing organism C from sewage, A., III, 276. Pirie, H. Sco Imperial Chem. Industries. Pirie, M. V. See Ferranti, Ltd. Pirie, N. W. See Bawden, F. C. Pirosky, I., protein fractions of serum as different antigens, A., III, 115. See also Lvov, A., and Ramon, G.

Pirotzki, P. P., experimental verification of formula $Li^n = \text{const.}$ for ignition limit of gaseous mixtures with the break spark, A., I, 247.

Pirrone, F., hydroxyquinolines. III. Syntheses of diphenylquinolinoisooxazine and of its N-substituted derivatives, A., II, 524.

See also De Fazi, R.

Pirrone, P., pharmacology of dibromo-cholesterol, A., III, 134.

Pirsch, J., nature of space occupation of organic molecules as decisive factor for magnitude of molecular latent heat of fusion, A., I, 122.

Pirson, M., motor spirit from coal, B., 751. Pirtea, T. I., determination of lanthanum

with S-hydroxyquinoline, A., I, 47.
Pirtzchalov, N. I. See Gerasimov, J. I. Pisa, M., and Delia Vida, B. L., alimentary cholesterolæmia in animals with hepatic lesions, A., III, I71.

Pisarenko, A., and Mischustin, I., activation of fillers of rubber mixtures, B., 66.

Pisarshevskaja, E.L. See Zvjagintzev, O.E. Pisarshevski, L.V., theory of heterogeneous catalysis, A., I, 572.

and Glückmann, T. S., influence of solvent on heterogeneous catalysis; catalysis of hydrogen peroxide [decomposition] in different solvents. I., A., I, 572.

Pishawikar, D. G. See Shah, S. V. Pisterman, P. A. See Schtekkel, F. A. Pistor, H. See Diels, O. Pistor, H. J., colorimetric determination

of decolorisation of methylene-blue by dehydrogenase enzyme preparations, A., III, 268.

Pitamiglio, J. P., mineral resources of

Uruguay, A., I. 382. Pitman, A. L. See Groggins, P. H. Pitman, B. M., cleaning composition, (P.), B., 367.

Pitous, A. See Damade, R. Pitschak, G. See Waldmann, H. Pitschugina, A. A. See Petrov, G. Pitt, F. H. G. See Selwyn, E. W. H.

Pitt. N. P., and Gill, A. F., soluble silicate binders and products [refractories] made therewith, (P.), B., 1343.

Pittman, C. U. See Traxler, R. N. Pittman, M. A., infra-red dispersion of chloroform and bromoform, A., I, 548. Pittman, M. S. See McCampbell, C. W.

Pittsburgh Club, standardisation and matching of opaque paint colours, B., 157. Pittsburgh Plate Glass Co. See Fix, E. L.,

Gelstharp, F., Hoffmann, G. F., Miller, R. W., and Noyes, W. A.

Pittsburgh Research Corporation. See

Moore, W. E.
Pitzer, K. S., thermodynamic functions for molecules having restricted internal rotations, A., I, 998. Thermodynamics of gaseous hydrocarbons: ethane, ethylene, propane, propylene, n-butane, Δ^a -butene, cis- and trans- Δ^{β} butene, isobutene, and neopentane (tetramethylmethane), A., Î, 398. Thermodynamics of gaseous hydrocarbons, A., I, 557.

See also Kemp, J. D., and Smith, W. V. Piutti, P., and Dinelli, D., micro-determination of sulphur in organic substances, A., II, 358.

Piveteau, and Colvez, special steels for heat exchangers, B., 563.

Pivovarov, V. M., control of sugar-beet webworm (Loxostege sticticalis, L.), B.,

Piwowarsky, E., and Söhnehen, E., heat treatment of cast iron, B., 559, 789. See also Bertschinger, R.

Pizer, N. H., environment and nutrition of the cultivated mushroom, Psalliota campestris. I. Properties of composts in relation to growth of mycelium, B., 1104.

See also Goodwin, W.

Place, P. B., Alabama coals—their classification and analyses, B., 309. Kansas and Missouri coals, B., 743. Illinois coals—classification and analyses, B., 858. West Virginia coals, B., 1151.

Plachuta, N. I. See Eminov, E. A.Placidi, L., and Morel, C., viscous protein of anti-anthrax serum, A., III, 250.

Placinteanu, J. J., electronic nature of light, A., I, 110. Electronic photon, A., I, 215. Equation of the photon, A., I, 278. Wave function of the photon, A.. I, 341.

Placzek, G. See Bethe, H. A. Plagge, H. H., recent results of applestorage investigations, B., 835.

Plahl, W., and Fürstenau-Obadalek, E., honey of unusual composition, B., 615.

Plakan, J. J., reaction between ammonium salts and complex nitro-derivatives of cobalt, A., I, 95.

See also Tscherniaev, I. I.

Plaksin, I. N., and Koschuchova, M. A., physico-chemical basis of the process of amalgamation, A., I, 128.

and Schibaev, S. V., gold ores of Retiv and Alekxandrovsk veins, B., 685.

Plaksina, E. F. See Fleischer, N. A. Plambeck, A. O., synthetic lacquers, B., 699.

Plan, P. See Etienne-Martin, P. Planiol, R., application of molecular beams to the production of light ions, A., I, 388.

Planje, C. W., coloured ccramic aggregate for decorative concrete, B., 549.

Plank, J. E. van der, and Davies, R., temperature-cold injury curves for

fruit, B., 1402. Plant, C. H., application of X-rays to metallurgy. I.—III., B., 51. Plant, J. H. G. See Griffith, R. H.

Plant, O. H., toxicity of rhodium, A., III, 66. and Slaughter, D., chronic morphine poisoning in dogs. VI. Effect of increasing tissue oxidations by dinitrophenol on excretion of morphine in tolerant and non-tolerant dogs, A.,

Plant, S. G. P. See Blount, B. K. Plant Rubber & Asbestos Works. See Abrahams, S. A.

III, 66.

Plantefol, L., effect of 2:4-dinitrophenol on cellular oxidation in yeast, A., III, 143. Intrinsic and extrinsic respiratory oxidation, A., III, 172. Influence of oxygen tension on the gaseous exchange of yeast; autofermentation, A., III, 180. Complementary oxidation in the autofermentation of yeast, A., III, 180. Extrinsic character of oxidations brought about by glucose, A., III, 409.

Plasmat, world plastics; trade marks, production, properties, and uses, B., 1083. Plastergon Wall Board Co. See Fletcher, J. Plastinin, I. V. See Makarov, A. V.

Plate, A. F. See Kazanski, B. A., and Titz, I. N.

Platen-Munters Refrigerating System Aktlebolaget. See Electrolux, Ltd.

Platkovskaja, V. M., and Vatkina, S. G., sensitivity of colour reactions for phenols, A., II, 222. Determination of sensitivity of certain colour reactions for aldehydes and ketones, A., II, 323.
Platonov, G. P. See Schmidt, P. J.

Platonov, M. S., Krivoschlikov, N. F., and Marakaev, A. A., qualitative reactions for niobium and tantalum, A., I, 265.

and Tomilov, V. I., catalytic properties of rhenium. III. Preparation of rhenium catalysts. IV. Catalytic decomposition of formic acid and ethyl alcohol, A., I, 369. See also Krivoschlikov, N. F., and

Nekrasova, O. V.

Platonova, M, A. See Pigulevski, G. V. Platschenov, T. G. See Alexevski, E. V. Platt, A. P. See Channon, H. J.

Platt, B. S., and Lu, G. D., beriberi and vitamin-B, deficiency, A., III, 231.
Platt, K. J. See McRae, J. A.

Platt, W., fundamental assumptions pertaining to judgment of food flavours, В., 1128.

See also Crocker, E. C.

Platte, J. A., and De Vries, G. H., method and plant for continuous crystallisation of sugar solutions, B., 828.

Platten, M. G., differentially leaching ores to separate lead and other metals from

zinc sulphide, (P.), B., 135.

Plattner, P. A., and Pfau, A. S., volatile plant substances. V. Preparation of the fundamental substance of the azulene series, A., II, 183.

See also Ruzicka, L., and Susz, B. Platz, H., and Schenk, P. W., discoloration of zinc sulphide in light, A., I, 38.

Platzmann, C. R., oil paint in lime plasters, B., 260. Now system for coment testing, B., 554. Coloured roofing felt, B., 676. Apparatus for studying effect of aggressive solutions on mortar, B., 1055.

Plauson, H., and T. R. C. Corp., road paving, (P.), B., 41. Building of roads,

(P.), B., 41.
Plant, F., and Bülow, M., influence of narcotics on vitamin-C content of spinal fluid and brain, A., III, 25. Examination of cerebrospinal fluid in diagnosis of vitamin-C deficiency; delayed excretion of ascorbic acid in cases with low ascorbic acid content in the fluid, A., III,

Player, E., automobile foundry work, B., 142.

Plazek, E., 3-hydroxypyridine. I. Amination and sulphonation, A., II, 75. Constitution of products of sulphonation of 3-amino- and 3-hydroxypyridine, A., II, 260.

and Rodewald, Z., 3-hydroxypyridine. II. Nitration and iodination, and 2:3-dihydroxypyridine, A., II, 170.

See also Marcinkow, A., and Rodewald, Z. Pleass, (Miss) W. B., influence of temperature on liming of ox-hides and goatskins. I. Liming of fresh ox-hide in presence of sodium chloride. II. Liming of sun dried hides in presence of sodium chloride. III. Liming of sun-dried China hides in presence of sodium sulphide. IV. Liming of sun-dried goatskins in presence of sodium sulphido and sodium chloride, B., 474, 816, 1093, 1380. Plechan, M. I. See Rachlina, S. S. Pleger, I. See Weibke, F.

Plentl, A. A. See Niederl, J. B.

Pleschtizer, A., effect of magnesia dust on the organism of the worker, A., III, 63. Changes in magnesium and calcium of blood-serum under different conditions of work, A., III, 337.

Pleskov, V. A., electrode potentials of lithium, rubidium, and calcium in liquid ammonia, A., I, 310. Conductometric determination of traces of water in liquid sulphur dioxide, B., 665. Rapid determination of water in liquid ammonia, using metallic sodium, B., 1042.

See also Gurjanova, E. N.

Pless, J. See Bienenstock, M.

Plessey Co., Ltd., electrolytic condensers, (P.), B., 255. See also Gaut. G. C.

Plessing, H. See Maurer, K. Plessmann, F. See Adickes, F.

Pletenev, S. A., and Fischkova, C. E., separation of metallic nickel from solutions of its salts by action of metallic zinc or iron, A., I, 95.

and Rozov, V. N., e.m.f. of concentration chains in the fused state, A., I, 619. Electrodeposition of copper and zine from solutions of their chlorides, B., 52.

Pleteneva, N. See Weichherz, J. Pletnikova, E. I. See Skopintzev, B. A. Pletnjev, A. V., vitamin-A and the visual function and phototropism of chickens,

A., III, 231.

Pletschev, D. J., use of fir in production of (mechanical) wood pulp and sulphite pulp suitable for reworking into newsprint at a high paper-machine speed, B., 25.
Plettner, G. See Schürhoff, P. N.

Pletz, V. M., chloride of allylphosphorous acid, and certain of its reactions, A., II, 54. Review on the organic compounds of phosphorus, A., II, 221. Structure of hypophosphorous acid. I. Reaction of aryldiazonium salts with hypophos-phites. II. Reaction of arylhydrazines with hypophosphites. III. Reaction of aryldiazonium salts with phosphorus trichlorido and sodium disopropyl phosphite. IV. Reaction of hypophosphites with alkyl halides, A., II, 221.

Pleydell-Bouverie, C., and Lucas, O. D., catalytic oxidation of naphthaleno, (P.), B., 421. Preparation and use of cata-

lytic bodies, (P.), B., 667.
Plimmer, R. H. A., and Burch, W. J. N., esters of phosphoric acid. III. Ethanolaminephosphoric acid and phosphorylcholine, A., II, 140. and Lowndes, J., analysis of proteins.

IX. Content in amino-acids of the caseinogen and lactalbumin of woman's

milk, A., III, 458.

Plimpton, S. J., and Lawton, W. E.,
Coulomb's law of force between charges, A., I, 67.

Ploetz, T. See Wieland, II.

Ploos van Amstel, J. J. A. See Burgers, W. G.

Plotnikov, M., objective tests of colour reproduction on infra-red-sensitive films, В., 982.

Plotnikov, V. A., atomic nucleus, A., I, 213. Isobars, A., I, 214.

and Barmaschenko, I. B., electrochemical and cryoscopic study of the systems AlBr₃-SnBr₄ and -RbCl in benzene, A., I, 32.

Plotnikov, V. A., and Gorenbein, E. J., electrochemical study of alkali halides in benzene and nitrobenzene solutions of aluminium bromido and chloride, A., I, 187.

and Jakubson, S. I., electrochemical study of the system AlBr3-AsBr3 in othyl bromide, A., I, 32. Electrochemical study of the system AlBr₃-NaI in benzene, A., I, 32. Thermochemistry of complex compounds of aluminium. I. Compounds of aluminium bromide with motallic bromides, A., I, 518.

and Katznelson, I. L., electrochemical researches on the systems aluminium bromide-ethyl iodide-silver or copper

halides, A., I, 31.

and Kudra, O. K., electrolysis of benzenenitrobenzene solutions of potassium and aluminium bromides, A., I, 32.

and Podorvan, I. M., refraction of complex compounds of aluminium chlorido and bromide in non-aqueous solvents,

and Razumov, V. K., reduction of oxides of iron by hydrogen and carbon monoxide in a high-frequency electro-

magnetic field, B., 43. and Schvartzman, U. I., equilibrium in the system AlCl₃-KCl-NaCl, A., I, 30. and Tschali, V. P., conductivity and

cryoscopy of iodine solutions, A., I, 31. and Vaisberg, R. G., electrochemical researches on chlorides and bromides of aluminium and antimony in nitrobenzene, A., I, 31.

and Zosimovitsch, D. P., formation of aluminium-copper and zinc-iron alloys

in galvanic elements, A., I, 189.
Zosimovitsch, D. P., and Kiritschenko, E. I., electrolytic deposition of silver from non-aqueous solutions containing aluminium bromide, A., I, 470.

Plum, K., relief of spasm by opium alkaloids, A., III, 267. Determination of small amounts of strychnine with Carassius vulgaris, A., III, 267.

Plum, W. B., infra-red absorption spectra of four Grignard solutions, A., I, 218. Plumb, D. S., technological importance of

reclaimed rubber, B., 703.

Plumley, H. J., contact potentials for metals immersed in a dielectric and conduction of electricity by liquid dielectrics, A., I, 497.

Plummer, C. A. J. See Cullinane, N. M. Plummer, H. See Homer, C. E.

Plummer, H. C., abrasive action of sewage on brick sewers, B., 1281.

Plummer, J. H., transmissions of powder films to the infra-red spectrum, A., I, 281. Plummer, J. K., and Tennessee, Corp.,

phosphate fertiliser, (P.), B., 715. Plummer, W. B. See Standard Oil Co. of

Indiana. Plyler, E. K., and Barr, E. S., infra-rod

absorption spectra of aqueous solutions of acetic acid and its chlorine derivatives, A., I, 548. See also Williams, D. Plzak, F. See Bures, E.

Pneumereator Co. Seo Thomas, William.

Po, W. W. See Ze, N. T. Pochil, A. I. See Kratinova, E. P. Pochil, O. I. See Kratinova, K. G.

Pochil, P. F. See Bresler, S. E. Pochon, J., precipitating power of therapeutic anti-anthrax sera, A., III, 116. See also Cotoni, L.

Pochon, M., radium recovery from ores, B.,

Pocock, R. W., and Whitehead, T. H., Welsh Borderland, A., I, 206.

Pocoulé, A. See Ungar, Georges.
Poctivas, M., and Tchoubar, (Mlle.) B.,
action of magnesium ethyl bromide and of magnesium bromide on ββ-dimethylstyrene oxide, A., II, 415.

Podaschevski, M. N., and Kondoguri, V. V., magnetic analysis of the rare earths, A., I, 47.

and Polonski, A. M., photo-electric elasticity limit of photochemically coloured rock-salt crystals, A., I, 228. Podbielniak, L. W. G. See Podbielniak,

W,J.

Podbielniak, W. J., effecting contact between incompletely miscible liquids, (P.), B., 5.

and Podbielniak, L. W. G., securing countercurrent contact of fluids by centrifugal action, (P.), B., 1150.

Poddubni, V. Seo Tartakovski, P. Podeiko, A. G., and Golubev, I. F., hydro-

gen welding, B., 45.

Podgorbunski, V. A., decomposition of cassiterite by zinc dust at high temperatures, and by zinc and hydrochloric acid

at room temperature, B., 684.

Podolskaja, M., influence of gossypol on colour of cottonseed oil, B., 366.

Podolsky, B., interactions of electro-

magnetic fields, A., I. 7.
Podorvan, I. M. See Plotnikov, V. A.
Podossep, L. J. See Alexeevski, E. V. Podrezov, V. I. See Petin, N. N.

Podsharskaja, D. A. See Schachno, A. P. Podszus, E., resistance of boron, A., I, 291. Podtimtschenko, E. N. See Mikulinski, A. S.

Podtimtschenko, E. P. See Jatlov, V. S. Podurovskaja, O. M. See Kagan, M. J. Podvojski, L. N. See Frid, J. L.

Podzimková-Rieglová, M., antiscorbutio activity of the cabbage, A., III, 326.

Poe, C. F., determination of camphor in camphor liniment. V. In an atmosphere of nitrogen, B., 728.
Strong, J. G., and Witt, N. F., toxicity

of certain codeine compounds for male and female rats of different ages, A., III, 426.

and Williamson, J. H., action of hexamethylenetetramine on members of the colon and aerogenes group [of bacteria], A., III, 225.

See also Klemme, D. Pöckel, I. See Bartlett, P. D.

Pölkkynen, O. See Routala, O.

Poll, H. See Suida, H.

Poenarn, H. See Condrea, P. Poethke, W., alkaloids of Veratrum album. I. Preparation of alkaloids and their distribution amongst rhizomes, roots, and leaf base; germerine, a new alkaloid

of V. album, A., II, 394.

Pogány, A., determination of wear-resistance of concrete from wear-resistance of cement and filler, B., 555. Determination of tensile strength from the bursting pressures of hollow concrete cylinders, B., 785. Internal stresses in concrete, B., 785.

Pogodin-Alexeev, G. I., types of tool-steel

microstructure, B., 446.

Pogodina, V. N., and Fainschralber, M. S., analysis of brass, bronze, and zine alloys, B., 683.

Pogonkina, N. I. See Zaitschenko, P. Z.

Pogorelskaja, N. A. See Amitin, B. Z.Pogrebetzki, E. See Petrov, G.

Pohl, A. See Braun, J. von. Pohl, E. See Cobb, R. M.

Pohl, H., recent developments in carbon monoxide indicators, B., 133. Relations between the spontaneous combustion in coal seams and their petrographie composition, B., 859.

Pohl, Hugo, loss of alcohol by evaporation during fermentation of molasses, B., 384. Vaporisation of alcohol during the fermentation of molasses mashes, B., 829.

Pohl, M. von. Soviet-Russian investigations of corrosion protection of chemical plant, B., 929. Chemical purification of waste water from baths, B., 1414.

Pohl, R., dependence of growth of Avena colcoptiles and their so-called growthsubstance production on auxin content of the endosperm, A., III, 241. Zonal growth of the Avena coleoptile: effect of artificial growth substance, A., III, 409.

Pohl, R. H. See Koenig, W. J.
Pohl, R. W., influence of temperature on the photo-electric primary current in crystals, A., I, 347. Electron conductivity and photochemical processes in alkali halido crystals, A., I, 550.

Pohland, R., preparation of tin triaryl halides, A., II, 357.

Pohle, H. W. See Seevers, M. H.

Pohle, W. D. See Hartman, F. A. Pohnan, F. J. See Brownlee, A. L. Pohoska, J. See Lampe, W.

Poindexter, F. E., Reardon, A. J., and DeFoe, O. K., new pressure effect in photography, B., 1275.

See also Lyon, W. J.

Pokrovskaja, E. S. See Nametkin, S. S. Pokrovski, E. A., new source of sulphur for combating insects and diseases, B., 826. agricultural

Pokrovski, N. L. See Scmentschenko, V.K.

Pokrovski, V. A., study of disperse systems by methods of quantitative filtrational

analysis, A., I, 181.

Polak, J. J. See Westenbrink, H. G. K.

Poland, G. L. See Brenner, M. W., and Harris, P. L.

Polanyi, M., transition state in chemical kinetics, A., I, 312. Transition state in chemical reactions, A., I, 312.

See also Evans, M. G., and Horrex, C. Pole, G. R. See Curtis H. A. Polensky, F. See under Polensky & Zollner.

Polensky, G. See under Polensky & Zollner. Polensky, O. See under Polensky & Zollner. Polensky & Zollner, working up ores, etc., containing zinc oxide mixed with oxides of volatile metals such as lead, (P.), B.,

Polesicki, A., lower limit of formation of mixed crystals of the new type, A., I, 74. Poletti, R. A., coagulation; bleeding and blood-calcium: its modification by ingestion of a mixture of calcium lactate and ammonium chloride, A., III, 249. Polev, G. A. See Ipatiev, V. V., jun.

Poliatzkina, B. See Tilevitsch, E.

Policard, A., and Ferrand, M., ascorbic acid content of ovary and corpus luteum at various stages of the œstrous cycle, A., III, 78.

and Rojas, P., micro-incineration of the red corpuscles of the teleost, Cichlasoma fascetum, Jen., A., III, 163. See also Manceau, P.

Poliektova, N. S. See Dimov, A. M.

Polimanti, O., hibernation, A., III, 196. Polin, H. S., and Polin, Inc., corrosion preventive, (P.), B., 54.

Polin, Inc. See Polin, H. S. Polinard, E., chemical-mineralogical investigation of crystalline rocks from the Bondo region, near l'Uelé, N. Belgian Congo, A., I, 204.

Politzer, M., lipin metabolism during experimental uranium nephritis, A., III, 14. Nervous control of gaseous exchange, A., III, 53.

Polivka, J., new developments in glass for constructional purposes, B., 439.
Poljak, A. M., nitric acid treatment of

apatite, with production of dicalcium phosphate and calcium nitrate, B., 1199.

and Blagovestschenskaja, N. S., production of ammonium sulphate from gypsum, B., 1335.

Poljakov, K., and Vassiliev, A., tower process [of sulphuric acid manufacture] without use of lead, B., 664.

Poljakov, M. V., and Grjanenko, K., rôle of the solid phase in ignition of combustible mixtures, A., I, 36. Influence of the solid phase on the thermal ignition of the mixture CH4+2O2, A., I, 573.

and Korneeva, A. V., influence of the solid phase in the kinetics of slow oxidation of methane, A., I, 368.

Stadnik, P. M., and Neimark, I. E., heterogeneous-homogeneous catalysis: $CH_4 + O_2$, A., I, 251.

and Weinstein, F. M., heterogeneoushomogeneous catalysis: C2H4+O2, A., I, 251.

Poljakov, S. See Molitch, M. Poljakov. V. D. See Nikolaev, V. I. Poljakova, E. M. See Jatlov, V. S. Poljakova, I. M. See Kirsanov, A. V. Poljakova, L. B. See Bergman, A. G.

Pollack, H., and Reiner, M., ionised bloodcalcium in patients with renal calculi, A., III, 58.

Pollak, E., improving [creasing tendency] of fibres, yarns, fabrics, felt, paper, etc., (P.), B., 131.

Pollak, L., lactic acid [in tanning], B., 68. [with Springer, W., and Patzenhaner, A.], effect of different additions on the $p_{\rm H}$ values of boric acid, B., 1094.

and Deimel, L., chemical control of soaking [of hides and skins], B., 1247. Pollak, R. See Mutschin, A.

Pollak, W. See Liebesny, P.

Pollard, A., and Amies, C. R., alleged tumour-producing properties of lipin material extracted from Rous sarcoma desiccates, A., III, 418. See also Perkin, W. H., jun.

Pollard, A. G. See Higgins, J. C., Holman, W. M., and Mulwani, B. T.

Pollard, C. B. See Bain, J. P., Hampton, B. L., Smith, M. E., and Stewart, V. E.

Pollard, E., emergence of low energy protons from nuclei, A., I, 214. and Brasefield, C. J., transmutation of

potassium, chlorine, and phosphorus by Th-C'a-particles, A., I, 58. a-Particle bombardment of neon, calcium, and argon, and masses of light nuclei, A., I, 108.

Schultz, H. L., and Brubaker, G., emission of neutrons from chlorine and argon under a-particle bombardment, A., I, 107.

See also Brubaker, 🚓 👵 👉 👉 😘 🖂

Pollard, H. V. See Gough, H. J.

Pollard, J. D., and Leonard, V., nitrated o-alkyl-phenolic compounds, (P.), B.,

Pollard, W. B., micro-determination of

gold, A., I, 533.
Pollard, W. G., Fermi theory of β-decay, A., I, 4.

Pollés, C. See Lasansse, E.

Pollitt, G. P., recent developments in grass drying, B., 837.
Pollitt, R. J. See Brannon, J. M.

Pollitt, S. D. See Appleyard, K. C.

Pollock, H. See Fischer, H. O. L. Pollock, L. J., and Boshes, B., carbo-

hydrate metabolism in epilepsy, A., III, 3Ŏ0.

Pollock, R. T., and Respats, Inc., pressed fibre board, (P.), B., 129.

Pollok, H. See Bergmann, M.

Polonovski, M., physico-chemical modification of milk constituents during concentration of milk with sugar, B., 1260.

Bizard, G., and Warembourg, H., effect of complete isolation of circulation on the peripheral blood-sugar, A., III, 84. Action of insulin on muscle-glycogenolysis in the dog, A., III, 279.

Bizard, G., Warembourg, H., and Lamour, P., effect of peripheral injection of insulin on blood-sugar of a limb isolated from the general circulation,

A., III, 102.

Polonskaja, L. A. See Sabinina, L. E. Polonski, A. M. See Kirilov, E. A., and Podaschevski, M. N.

Polonski, T. M., action of neutral salts on capillary activity of organic substances.

Poloskin, E. N., Apevalkin, S. I., and Gotovkina, L. V., improvement in quality of synthetic rubber by thermal treatment, B., 1378.

Polotschanskaja, E. E. See Mischin, V. P. Polozov, V. F. See Anissimov, S. B., and Kliukvin, N. A.

Polson, A., diffusion constants of the

amino-acids, A., I, 615. Poltoratskaja, O. See Karpatschov, S.

Poltz, H. See Erk, S.

Poluektov, N. S., sensitive reaction for germanium, A., I, 329. Drop reaction for detection of rhenium, A., I, 329,

and Nazarenko, V. A., volumetric determination of sulphur in sulphide ores, B., 573.

See also Komarovski, A. S.

Polukarov, M. N., and Apollov, N. A., influence of selenium compounds on saturation of steel with electrolytic hydrogen, and variation of its elasticity, B., 578.

Polushkin, E. P. See Fink, C. G.

Pólya, J. See Mohler, H.

Akt.-Ges., separators: [pneumatic classifiers], (P.), B., 632. Pneumatic separators, (P.), B., 993. See also Ihlefeldt, J.

Pomerantschuk, I. Seo Achieser, A., and Landau, L.

Pomerantz, A., and McNabb, W. M., determination of arsenic in silver arsenate, A., I, 45.

Pomerat, C. M., and Zarrow, M. X., respiration of the newt. I. Method and data on the normal and gonadectomised animal, A., III, 465.

Pomey, J., standardisation of the salt-spray test [for metals], B., 1355. Pomorski, J. See Swientoslawski, W.

Pomp, A., and Heckel, H., influence of die, lubricant, and rate of drawing on power consumption in drawing of fine steel wires, especially on multiple machines, B., 682,

and Hempel, M., fatigue-strength diagrams of steels at various tensions, with special reference to the form of

the test-piece, B., 790.

and Krisch, A., mechanical properties of [steel] cable wire in the temperature region from 20° to -50°, B., 1060. Changes in stress, elongation, and rate of creep with time in the tensile test, especially at the yield point, B., 1350.

and Lueg, W., influence of degree of rolling, rolling temperature, and thickness relations on the rolling process and mechanical properties of the rolled material in the hot-rolling of medium-hard carbon steels, B., 791.

Seo also Körber, F.

Pompéi, (Miss) A., half-life period of radium-E, A., I, 338.
Pomphrey, J., anti-crease treatment of cellulose fabrics, (P.), B., 233.

Pond, T. C., and Johns-Manville Corp., [sound-absorbent] cellular material, (P.), B., 1058.

Ponder, E., permeability of erythrocyte membrane after hypotonic hæmolysis, A. III, 1. Physical structure of the red cell membrane, with special reference to its shape, A. III, 369.

and Abels, J. C., diffusion of ions through collodion membranes treated with

urethanes, A., III, 425. and Macleod, J., effect of hæmolytic substances on white cell respiration, A., III, 53. Potential and respiration of frog's skin. I. and II. Effect of homologous carbamates and certain lysins, A., III, 134.

See also Macleod, J., and Schmitt, F. O. Pongratz, A. Seo Kohlransch, K. W. F.,

and Zinke, A.

Poni, (Mlle.) M. See Cernatescu, R. Ponomarenko, A. T., geological description of the Kivdo-Raichichin brown coal deposit, A., I, 538.

Ponomarenko, R. See Zeldin, S. Ponomarev, A. I., accelerated determined mination of silica in siliceous minerals, B., 1049.

Ponomarev, A. L. See Suloev, A. I. Ponomarev, V., and Daniluschkina, L. preparation of bituminous cement and investigation of some of its properties, B., 348.

Ponomarjev, W. See Petrosjan, E. Pons, L. See Kögl, F.

Ponte, A., and Cavallone, G., acid content of vegetable tan liquors, B., 952.

Ponte, D., determination of alkaloids in pharmacopæial preparations of nux vomica, B., 729.

Pontecorvo, B., absorption of slow neutrons, A., I, 161. Origin of the non-homogeneity of y-radiation of slow neutron capture, A., I, 339.

Pontius, R. B., superconductors of small

dimensions, A., I, 451.
Pontzen, H., and Amer. Lurgi Corp., combination furnace [for metals or ores], (P.), B., 799.

Ponzio, G., dioximes. CXXI., A., II, 155. and Formaseri, M., dioximes. CXIX., A., II, 155.

and Tappi, G., dioximes. CXXIII., A., II, 504.

Poo, L, J. See Addis, T.

Pool, D. F., gas generator, (P.), B., 644. Pool, M. L., energies and products involved in nuclear disintegration and

synthesis, A., I, 340.

Cork, J. M., and Thornton, R. L., radioactivity due to neutron ejection produced by fast neutrons, A., I, 389. Simultaneous ejection of three neutrons from elements bombarded with fast neutrons, A., I, 489. Radioactivity produced by high-energy neutron bombardment, A., I, 490. Positron-electron-emitting isomeride in radio-silver, A., I, 545. See also Whitmer, C. A.

Pool, T. A., rotary washing and screening machine, (P.), B., 633.

Pool, W. See Brit. Celanese.
Pool, W. O., Harwood, H. J., and Ralston,
A. W., 2-alkylbenziminazoles as derivatives for identification of aliphatic acids, A., II, 118.

See also Raiston, A. W. Poole, E. G. C. See Binnie, A. M. Poole, H. H. See Atkins, W. R. G.

Poole, R. F., control of bacterial wilt disease of tobacco, pepper, and Irish potato, B., 481. Relation of zinc sulphate to control of arsenical injury to the peach, B., 603. Effects of copper compounds on control of Bacterium pruni and on the peach tree, B., 1106.

Poole, S. W. See Sergeson, R. Pope, A. S., and Zacks, D., epidemiological aspects of silicosis and tuberculosis, A., IIĪ, 59.

Pope, H. W. J., modern developments in electrodeposition of gold, B., 579.

Popesco, C. See Ionesco-Matiu, A.

Popescu, (MUe.) M. See Maxim, N. Popescu, O. See Ionescu, M. V. Popham, F. J. W. See Rubber Producers

Res. Assoc. Popilski, M. See Juschmanov, E. V.

Popkin, A. H. See Marker, R. E. Poplavko, N. Seo Rappoport, E.

Popov, B., and Neujmin, H., optical dissociation of the lead halides, A., I, 8.

Popov, K., emulsifying agent for margarine,

Popov, K. M., and Vegrin, M. L., colorimetric determination of silicon in metallic magnesium, B., 1066.

Popov, M. See Etinburg, E. Popov, N., Schmakova, E., and Knznezova,

V., effects of feeding-stuffs on pancreatic function of calves, A., III, 127. Popov, P. V., calcium arsenate standard,

Popov, V. P., technique of the refractometric determination of bound water in plants, A., III, 189. Rôle of combined water in the frost-resistance of winter wheat, B., 479.

See also Demidenko, T. T. Popova, A. See Leltschnk, S.

Popova, A. A. See Kuzminich, I. N. Popova, A. N. See Bolotov, B. A., and

Perschke, V.

Popova, E. M., liquefaction of yeast during

storing, B., 606.

Popova, G. See Zaring, I. I.

Popova, N. E. See Aleev, B. S.

Popova, O. See Zinoviev, A. Popova, T. A., calculation of isotherms in three-phase systems, A., I, 30. Calculation of isothermals in quaternary systems, A., I, 138. Popovici, N. See Deleano, N. T.

Popp, L. See Kruis, A.Popp, M., fertility of marsh soils, B., 819.and Contzen, J., action of a potassium fertiliser on marsh soil, B., 270.

and Westerhoff, H., colorimetric determination of phosphoric acid in fertilisers, B., 1101.

Popp, W., conversion of an annular limekiln to producer gas firing, B., 1343.

Poppe, H. See Waldmann, H.

Popper, E. See Spacu, G.

Popper, H., Mandel, E., and Mayer, Helene, determination of creatinine in blood, A.,

Poppov, I. D. See Zlatarov, A.

Porai-Koschitz, B. A., action of hydrogen chloride on solutions in alcohol of substituted phthalamic acids, A., II, 291. Reaction of certain amines with alkylarylphthalamic acids, A., II, 291.

Porai-Koschitz, E. See Valenkov, N. Porcelain Enamel & Manufacturing Co. of Baltimore. See Turk, K.

Poremski, V. See Sannié, C.

Porret, D., and Goodeve, C. F., continuous absorption spectrum of methyl iodide, A., I, 342.

and Rabinovitsch, E., reversible bleaching of chlorophyll, A., II, 471. See also Weiss, J.

Porritt, B. D., and Scott, J. R., ageing of vulcanised rubber; changes in mechanical properties, B., 1091.

See also British Rubber Manufs. Res. Assoc., and Daynes, H. A.

Porseh, H. See Kraft, K.

Porsche, J. See Kharasch, M. S.
Portals, Ltd., Marsden, J. C., and Knaggs,
J., [thickness control in] manufacture
of paper, (P.), B., 29.
Porteous, W. K., treatment of sewage or

other sludge-containing liquors, (P.), B., 850. Sewage disposal, (P.), B., 850. Porter, A. M., effect of light intensity on

the photosynthetic efficiency of tomato plants, A., III, 501.

Porter, B. H., impregnation studies with

colloidal graphite, B., 1001.

See also Szymanowitz, R.

Porter, C. W. See Olson, A. R., and Young, Leona.

Porter, D.J. See Cryder, D.S.Porter, E.F., unimolecular films of α aminostearie acid, stearic acid, and heptadecylamine, A., I, 612.

Porter, F., and Atmospheric Nitrogen Corp., purification of gases [nitrogen-hydrogen], (P.), B., 907.

Porter, H. J. See Robison, F. W. Porter, J. D. See Bancroft, W. D. Porter, R. H., Brown, E. O., and King, C. M., seed investigations: barley blight

control, B., 1389.

Porteus, G., disintegrators or grinding machines, (P.), B., 1288.

Portevin, A., foundry development, B., 1217. Thermal and electrical conductivities of metals and alloys, B., 1218.

and Castro, R., morphology of inclusions in siderurgical products. IV. Titanium, zirconium, and vanadium steels and alloys. V. General conclusions, B., 788.

Chaudron, G., and Moreau, Leon, rôle of

gas in metals, B., 790.

and Chevenard, P., transformations on cooling of steels, B., 680. and Guitton, L., rôle of inclusions in corrosion of steels, B., 445.

Portevin, A., and Herzog, E., effect of small proportions of added substances on marine corrosion of extra-soft steel, B.,

and Leroy, A., variation of chemical composition in gas welding of ordinary steels, B., 45.

and Séférian, D., influence of added clements in steel on absorption of nitrogen on fusion in the are, B., 351. Rôle of nitrogen in welds, B., 920.

Portier, H., magnesium alloys for constructional purposes, B., 1356.

Portsmouth, \hat{G} . \hat{B} ., variations in leaves of cotton plants grown under irrigation in the Sudan Gezira, A., III, 284.

Porzellanfabrik Kahla, and Handrek, H., joining of ceramic insulating members and metallic members, (P.), B., 441. Posa, E. G., analysis of blood of five

male and five female carabaos, A., III, 164.

Poschenrieder, H. See Niklas, H.

Posemann, H. See Reichert, B. Posharskaja, P. I. See Grigoriev, P. N. Posnansky, K. W. See under Alexander & Posnansky.

Posnjak, E. See Merwin, H. E. Pospeehov, D. A., synthesis of methyl alcohol at low pressures, B., 116. Determination of unabsorbed organic substances in air by catalytic oxidation, B. 625. Rôle of copper in methyl alcohol catalysts, B., 646.

Pospelova, K. A. See Figurovski, N. A. Possanner, B. von, Laubenheimer, A., Wagner, R., and Jenke, R., substitution of German for foreign clays [in papermaking], B., 126.
Possekel, H., drying plants, (P.), B., 856.

Posselt, E. See Avnsoe, T. Posselt, K. R. See Rollett, A.

Post, C. B., preferred orientation of lowcarbon strip steels, B., 1350.

Post, H. W., reaction of benzoyl chloride with aliphatic ortho-esters and acctals, A., II, 4.

Posternak, T., cyclitol series. IV. Inosose, a cyclose derivative of mesoinositol, A.,

Postnikov, B. F. See Korobov, N. N. Postnikov, N. N., electrical precipitation an urgent problem of the phosphate fertiliser industry, B., 35.

and Belotelov, \tilde{L} . P., experimental electric distillation of phosphorus from Vyatka phosphorites, B., 35.

Orlov, I., and Kriutschkov, N. I., production of double superphosphate on the basis of electrothermal phosphoric acid in the U.S.S.R., B., 1044.

Postnikov, V. F., Bronnikov, A. C., and Kirillov, I. P., nitrification of calcium oxide to yield technical calcium cyanamide, B., 903.

and Kirillov, I. P., viscosity of aqueous solutions of various salts, A., I, 126. Retardation of the solution of iron in sulphuric acid, B., 445.

Kunin, T. I., and Astascheva, A. A., contact activity of chromium oxide in oxidation of sulphur dioxide to sulphur trioxide, B., 133. Treatment of calcium cyanamide with phosphoric acid, B., 236. Purification of effluent from sodium sulphide manufacture,

Kuzmin, L. L., and Tzalm, N. K., oxidation of ammonia to nitrous oxide, B., 341.

Postovski, I. J., and Charlampovitsch, A. B., thioether sulphur in organic sulphur compounds of coal, B., 104.

and Chmelevski, V. I., rapid analysis of crude and purified anthracene, B., 876. Lugovkin, \vec{B} . P., and Mandrik, G. F., reaction of selenium dioxide with

certain hydrazines, A., II, 187. Postranecky, O., blood-sugar following injection of insulin during absorption of

glucose in normal and diabetic subjects, A., III, 300.

Potanova, A. A. See Levina, R. J.

Potapenko, G., and Sänger, R., determination of ferromagnetic properties of metals in the high-frequency region; (wire bridge method), A., I, 227. See also Keutner, E.

Potapova, N. G., effect of vibration (shake) on mechanical strength of paper, B., 27. Potash Co. of America. See Anderson,

L. D.

Potel, P., quality of wheat and flour, B., 608. Influence of different soils receiving continued applications of the same manures on wheat yields, B., 709.

See also Blair, G. W. S.

Potgieter, J. T., Argentine ant, B., 711. Potop, I. See Renescu, N.

Potozky, A., influence of mitogenetic radiation on cell perincability, A., III,

Potter, C. See Martin, J. T.

Potter, D., histamine ionisation therapy, A., III, 462. Potter, F. M. See Adam, W. G.

Potter, G. J. C., and Yorston, F. H., pulping of hardwoods by the sulphite process. I. Survey of the literature, B., 425. See also Edwards, J.

Potter, H.A. See Kohler, E.P. Potter, H.H. See Mott, N.F.

Potter, H. V., artificial resins, B., 259.

Potter, J. S. See Victor, J.

Potter, V. R., and Elvehjem, C. A., effect of inhibitors on succinoxidase, A., III, 96. See also Franke, K. IV.

Potterill, R. H., and Walker, O. J., ultraviolet absorption spectra of iodoform and of other tri-iodides in solution, A., I, 217.

Walker, O. J., and Weiss, J., electron affinity spectrum of ferrous ion in aqueous solution, A., I, 8.

Potthoff, K. T., and U.S. Galvanizing &

Plating Equipment Corp., apparatus for treating [plating] material, (P.), B., 693

Pottinger, S. R., Harrison, R. W., and Anderson, A. W., effect of method of manufacture on composition of haddock fish-meal proteins, B., 726.

See also Anderson, A. W., and Harrison,

Potts, A. E., variations in butter fat content of milk and cream, B., 1120.

Potts, H. R., selective converting [of copper bullion], B., 921. Causes of inefficiency in converter practice, B.,

Potts, T. T., and Bridge, F., laboratory fractionation of cellulosic materials, B., 766.

Potts, W. M. See Kharasch, M. S.

Pough, F. H., crystallised powellite from Tonopah, Nevada, A., I, 205. Morphology of gordonite, A., I, 430. and Southern Acid & Sulphur Co., sul-

phur preparation [fungicide], (P.), B., 716.

Poulsen, E_{\bullet} , autoagglutination, A., III.

Poulson, C. A., care and maintenance of waste-heat boilers, B., 1.

Ponltney, S. V., natural fruit drinks, B., 615.

Poupa, O. See Karasek, F.

Poupě, F. See Tomiček, O. Pourbaix, M., increasing the reactivity of cokes, (P.), B., 643.

Pourbaix, Y., effect of a water-soluble carcinogenic substance on metabolism of yeast carbohydrates, A., III, 483.

Powderco, Inc. See Law, D. V. Powel, W. S. See Powel & Hill, Ltd.

Powel & Hill, Ltd., Powel, W. S., and Hill, Frederic, mixing machines, (P.), B., 3.

Powell, A. D. See Hall, G. F.

Powell, Alan R., Box, E. R., and Johnson. Matthey & Co., [hardening of] preciousmetal [gold] alloys, (P.), B., 358. Pen nibs, (P.), B., 1227.

and Johnson, Matthey & Co., alloy for dental plates, (P.), B., 147.

See also Davies, E. C.

Powell, Alfred R., phenolate process for sulphur removal and sulphuric acid production from [petroleum] refinerystill gas, B., 1156.

Powell, C. S., application of compounded rubber latex to textile printing, B.,

Powell, D. W. See Harper, L. R.

Powell, E., does mental function depend on normal blood-sugar concentrations? A., III, 165.

Powell, E. C., jun. Soc Crockford, H. D. Powell, Herbert M., and Tasker, H. S., valency angle of bivalent lead; crystal structure of ammonium, rubidium, and potassium pentabromo-diplumbites, A., I. 118.

See also Burawoy, A.

Powell, Horace M., and Jamieson, W. A., preparation of Krueger undenatured bacterial antigens, A., III, 454.

and Lilly & Co., E., common-cold antigen, (P.), B., 1273.

Powell, L. S., sealed stirrer, A., I, 50. See also Cottle, D. L.

Powell, M., and Specialty Sales Corp., oil de-emulsification, (P.), B., 1304. See also Bavin, G. D.

Powell, M. E., effects of time and temperature of holding milk heat-treated at various temperatures on its subsequent coagulation by rennet, B., 1120.

Powell, R. F., comments suggested by Samuel's paper on flocculation, B., 448. Powell, R. W., thermal and electrical conductivities of a sample of Acheson graphite from 0° to 800°, B., 936.

Powell, S. T., and Bacon, H. E., industrial

water supplies, B., 985.

Power, H. R., finishing metallographic specimens, B., 928.

Power, M. H. See Adams, M., and Cragg, R. W.

Power-Gas Corporation, Ltd., Rambnsh, N. E., and Grisenthwaite, A. T., gas

from bituminous fuel, (P.), B., 519.

Powers, D. H., Bock, L. H., and Röhm & Haas Co., process of mercerising, (P.), B., 900.

Powers, E. J., asphyxiation and death in oxygen-deficient air, A., III, 427.

Powers, M. J., and Levine, M., effect of metabolites on growth and differentiation in the colon group, A., III, 317.

Powers, P. N., Beyer, H. G., and Dunning, J. R., magnetic moment of the neutron, A., I, 211.

Carroll, H., Beyer, H. G., and Dunning, J. R., sign of the magnetic moment of the neutron, A., I, 492.

Carroll, H., and Dunning, J. R., magnetic moment of the neutron, A., I, 441.

Fink, G. A., and Pegram, G. B., absorption of neutrons slowed down by paraffin at different temporatures, A., I, 544. See also Dunning, J. R.

Powers Regulator Co. See Klages, F. E. P. Powney, J., and Addison, C. C., properties of detergent solutions. II. Surface and interfacial tensions of aqueous solutions of alkyl sodium sulphates. III. Influence of added electrolytes on the surface activity of the higher alkyl sodium sulphates, A., I, 511.

and Frost, H. F., influence of p_{ff} on adhesional wetting by soap solutions,

B., 1079.

and Jordan, D. O., application of glass electrode to measurement in alkaline solutions, A., I, 323.

Poynton, N. H. See Johnson, Christopher H. Pozdena, L., formation of organic com-ponents of humus soils, with special reference to colorimetric methods [of determination], B., 268. Colorimetric examination and determination of humus, B., 1097.

Pozdniakova, T. D., heat of wetting of Al₂O₃, Fe₂O₃, MgO, and SiO₂ gels, A., I, 358.

Pozerski, E., bacterial culture utilising soaps as source of carbon, A., III, 225. Pozin, M. E., and Levina, C. A., solubility of calcium hypochlorite in aqueous calcium chloride, A., I, 24.

Pozner, E., calculation of concentration of saturated solutions of two relatively insoluble salts having a common ion, A., I, 30. Application of gaseous precipitants in gravimetric analysis; separation of iron, aluminium, magnesium, and calcium, A., I, 329.

Pozorski, E. F., determination of lead in alloys, B., 684. Determination of lead in tin-plating motal, B., 1221.

Pradham, M. G. See Loewenthal, H. Pradier, J. C. See Chédin, J.

Praetorius, E., and Stewart, J. E., selfgenerating photo-electric coll, (P.), B., 1231.

Pratorius, W. See Pfeiffer, P.

Prakash, S., non-spherical nature of colloidal particles in relation to formation of jelly structure, A., I, 28.

Pranchetti, S., γ-rays emitted on dis-ruption of Bo with a-particles, A., I,

Prandtl, W., absorption spectrum of terbium, A., I, 342.

Mayer, G., and Büttner, L., separation of hafnium and zirconium. II. Rôle of phosphoric acid in chemistry of zirconium, A., I, 265.

Prange, G., valuation of "Häckerle" [Silesian flesh paste], B., 835.

Pranke, E. J. See Du Pont de Nemours & Co., E. I.

Prasad, B. N., response to drugs of gut muscle in asphyxia and in iodoacetic acid poisoning, A., III, 135.

Prasad, H. See Singh, B. K. Prasad, M., De Sousa, L. A., and Shanker, J., X-ray investigation of triphenylmethane, A., I, 172. Prasad, M., and Dharmatti, S. S., anomalous diamagnetism of selonium, A., I, 292.

and Mohile, B. V., photoreduction of ferric chloride in alcoholic solutions in light of quartz mercury-vapour

lamp, A., I., 317.

Mohile, B. V., and Nigudkar, K. D., mechanism of photo-reduction of ferric chloride dissolved in alcohols, A., I,

and Shanker, J., X-ray investigation of crystals of o-nitrodiphenylamine, A.,

Shanker, J., and Peermohamed, B. H., X-ray investigation of diphenyleno disulphide and diphenyl disulphide. A., I, 448. Prasad, S. See Pal, R. K.

Prasolov, L. I., classification and nomenclature of soils, B., 1096.

Prat, M., ozonisers, (P.), B., 343.

Prát, S., detection of heavy metals in plants and chromospodogram method, A., III, 243. Permeability of wood to infra-red and X-rays, B., 676.

Prater, A. N. See Lucas, H. J.

Pratesi, P., pyrrole-blacks. I. and II., A., II, 123, 309. Action of phosphatases of green leaves on formaldehyde monophosphate, A., III, 483. Presence of phosphatases in green leaves, A., III, 483. Specificity of phosphatases of green leaves, A., III, 483.

See also Donatelli, L.

Pratt, A. D., wet feeds versus dry feeds for milk production, B., 83.

Pratt, D. D., plastic materials containing rubber, (P.), B., 158. See also Morgan, (Sir) G. T.

Pratt, D. R., improved fabrication of 18:8-chromium steels, B., 791.

Pratt, F. R., electric heater for a water

still, A., I, 533.

Pratt, J. D., gas defence from point of view of the chemist, B., 623.

Pratt, J. P., Hamblen, E. C., Kamm, O., and McGinty, D. A., human corpus luteum and progestin. II., A., III, 229. Pratt, N. F., apparatus for producing gas, (P.), B., 1158.

Pratt, N. H. See Drew, H. D. K.

Pratt, R., growth of germ tubes of Erysiphe spores in deuterium oxide, A. III. 235, 236.

Craig, F. N., and Trelease, S. F., influence of deuterium oxido on photochemical and dark reactions of photosynthesis, A., III, 240. Pratt, T. W. See Werner, H. W.

Pratt, W. B., Abbott, J., Chadwick, E. D., and May, M. B., treatment of cotton goods, (P.), B., 1328.

Prausnitz, P. H., new form of Darmstadt apparatus for determining non-tans in tannin analysis, B., 162. Jena glass filters for use in the determination of mono-saccharides with Fehling's solution, B., 1114.

See also Geffcken, W.

Pravdin, S. N., control of pulp viscosity during bleaching, B., 125.

Prebluda, H. J., and McCollum, E. V., detection and determination of vitamin- B_1 , A., III, 77.

Precision Meters, Ltd., and Horton, F., apparatus for filtering liquids, (P.), B.,

Predelli, P., amino-benzamido-derivatives, B., 415.

Predvoditelev, A. S., heat conductivity of solid heat insulators, A., I, 22. Heat conductivity of electrical conductors, A., I, 22. Theory of gas reactions in high-frequency electric discharges, A.,

Prece, F.H., steam generation in factories connected with the food industry, B., 78. Preece, I. A., starch conversion in brewery

mashing, B., 829.

Preininger, V., disinfection and disinfectants in fermentation industries, B.,

Preis, E. M., ageing of sols; ageing of the system mercury acetamide-electrolyto in aqueous solution, A., I, 361.

Nikolaeva, M. A., and Tscherkasskaja, P. M., relation between absorption of gases by liquid absorbents and the viscosity of the latter, A., I, 314.

Preis, H. See Baur, E.

Preisler, P. W., and Hempelmann, L. H., oxidation-reduction potentials of 2hydroxyphenazine and 2-keto-10methyl-2:10-dihydrophenazine [N-methylaposafranone], A., I. 140.

Oxidation-reduction potentials of derivatives of thioindigotin. I. Thioindigotin tetrasulphonate, A., II, 30.

Preisman, L. See Gen. Chemical Co.

Preiss, K. See Noll, A.

Preiss, M., [disc] grinding mills, (P.), B., 992. Grinding mills, (P.), B., 992.

Preiss, W., determination of ammonia in presence of pyridine bases in tobacco and tobacco smoke, B., 187. [Chemistry of] smoking, B., 187. [Pfyl's [analytical] smoking?method, B., 840,

Preissler, R. See Simon, Arthur.

Preiswerk, P. See Braun, A., Curie, M., and Halban, H. von jun:

Prell, C. See Murmann, E.

Prelle, F. A., nitre efflorescences on paint films. II., B., 62.

Prelog, V., 4-N-phenylpiperazinesulphonic
acid, A., II., 34.

and Cerkovnikov, E., 3-β-hydroxyethylproline, A., II, 165. Synthesis of discyclo[2:2:3]aza-I-nonane, quinuclidine-2-carboxylic acid, and β-4-piperidyl-propionic acid, A., II, 517.

Kohlbach, D., Cerkovnikov, E., Režek, A., and Piantanida, M., quinuclidine; dicyclo[2:2:2]aza-1-octane, A., II, 516.

Prenant, M., use of silver nitrate for study of texture of bones, A., III, 52.

Prendergast, M.J. See Jones, G. Preobrashenskaja, K. P. See Rubinstein,

Preobrashenski, N. A. See Schtschukina,

Préparation Industrielle des Combustibles, crushing devices, (P.), B., 40I.

Presbrey, R. L., blast-furnace slag for dry-box purification [of town's gas],

Prescott, B. See Grabfield, G. P. Smith Prescott, S. C., habits and control of moths

[in textiles], B., 654. . Emerson, R. L., and Peakes, L. V., jun.,

staling of coffee. I., B., 837. Emerson, R. L., Woodward, R. B., and

Heggie, R., staling of coffee. II., B.,

Present, C. H. See Keutmann, E. H., and Rnbin, S. H.

Present, R. D., second-order spin effects in ⁸H, A., I, 7. See also Breit, G., and Rarita, W.

Presnell, A. K., relation of vitamin-D to skin respiration, A., III, 496.

Pressed Steel Co., Ltd., and Simmie, W. S., welding [machine], (P.), B., 693.

Prestage, E., milk-pasteurising and -cooling units, (P.), B., 84.

Preston, E., and Seddon, E., temperatureproperty relationships: their bearing on constitution of glass, B., 545.

Preston, F. W., behaviour of glass in tanks, B., 240.

Preston, G. N., and G.W.B. Electric Furnaces, surface apparatus for exchange of heat between fluids, (P.), B., 856.

Preston, J. F. See Cooper, E. A. Preston, J. S., and Cuckow, F. W., photoelectric spectrophotometer of high

accuracy, A., I, 48, 266.
Preston, K. See Pritchett & Gold & E.P.S. Co.

Preston, R. D., and Astbury, W. T., structure of wall of green alga Valonia ventricosa, A., III, 189.

Preston, W. M., modification of spectral lines by very close collisions, A., I,

Prettre, M, kinetics of oxidation and ignition of hydrocarbons. I. Ignition delay and slow preoxidation of mixtures of n-pentane and oxygen between 250° and 300°; laws governing explosion phenomena, A., I, 86. Law governing initial acceleration of slow combustion and retardation of inflammation of mixtures of pentane, oxygen, and nitrogen, A., I, 86. Change of temperature of spontaneous inflammability of hydrocarbon-air mixtures with experimental conditions, A., I, 190. Heterogeneous combustion of mixtures of carbon monoxide and oxygen on a vitreous surface, A., I, 247. Heterogeneous combustion of mixtures of carbon monoxide, hydrogen, and oxygen on a vitreous surface, A., I, 523. Oxidation and inflammation in contact with hot surfaces. II. Heterogeneous combustion and adsorption of explosive gases on glass surfaces or glass surfaces coated with potassium chloride; influence of adsorption on the chain reaction of oxygen-hydrogen mixtures. III. Mechanism of the chain reaction of oxygen-hydrogen mixtures and effect of potassium chloride in this combustion, A., I, 572.

Přeučil, J. See Lukeš, R.

Preussische Bergwerks- & Hütten Akt .-Ges. See Haase, K. Prever, V., and Foglino, N., determination

of lead tetraethyl in benzines, B., 750.

and Goria, C., constitution and properties of clay materials (bentonites and

kaolin), A., I, 588.

and Locati, L., fatigue phenomena in spiral springs of "superharmonie" steel, B., 562.

Prévost, C., and Wiemann, J., iodinating properties of the complex of iodine and silver benzoate, A., II, 243. Silver-halogen complexes of benzoic acid, A., II, 289.

Sec also Martineau, L. Prévost, E., hydrocarbon mixtures and

physical properties, B., 752. Prevot, P., and Steward, F. C., features of [plant] root system relative to salt absorption, A., III, 106. Prianischnikov, A. E. See Gapon, E. N.

Prianischnikov, N. D., feeding-stuffs from straw, B., 1402.

and Nesterova, E. A., chemical treatment of straw by sodium hydroxide solution, B., 1321.

Price, C. C., effect of catalysts on the phenanthrene-bromine reaction, A., II, 12.

See also Fieser, L. F.

Price, D. J., dust disasters; consequences, causes, and control of dust explosions, B., 503.

Price, F. N. R. See Sutherland, C. L.

Price, H., control of a colliery spoil-heap fire, B., 859. Perminal W and calcium chloride treatment of haulage roads, B., 915. Price, H. C. See Gregory, L. S.

Price, J. R., and Robinson, R., nitrogenous anthocyanins. IV. Colouring matter of Bougainvillæa glabra, A., II, 206.

See also Macbeth, A. K. Price, J. W. See Robinson, H. W.

Price, W. A., relation between nutritional deficiencies and (a) facial and dental arch deformities, (b) loss of immunity to dental caries, among South Sea Islanders

and Florida Indians, A., III, 123.

Price, W. B., and Bailey, R. W., fatigue properties of five cold-rolled copper

alloys, B., 569.

and Scovill Manufg. Co., [brass] welding rod, (P.), B., 1071.

Price, W. C., Rydberg series in I I, A., I,

Í58.

and Evans, W. M., absorption spectrum of formic acid in the vacuum ultraviolet, A., I, 597.

See also Evans, W. M.
Price, William C., and Gowen, J. W., tobacco mosaic virus: inactivation by ultra-violet light, A., III, 319.

See also Gowen, J. W.
Price, W. V., bitter flavour of Cheddar cheese, B., 1124.

See also Byers, E. L., and Wilster, G. H. Prichotko, A., absorption spectrum of oxygen, A., I, 103. Absorption spectrum of solid oxygen in the far red, A., I, 435.

See also Obreimov, I.V.

Prickett, C. O. See Schrader, G. A.
Prickett, T. B. See Harrison, J. W.,

and Houdry Process Corp.

Prideaux, E. B. R., and Coleman, R. N., combination of fatty acids with nitrogen bases. II. Piperidine and lower fatty acids: conductivities and viscosities of liquid anhydrous salts. III. Mol. wt., surface tensions, viscosities, and conductivities in benzene of the system: piperidine-propionic acid, A., I, 126, 241.

and Webb, K. R., acid fluorides of the alkali metals. I. Rubidium, A., I, 145.

See also Coleman, R. N.

Priess, H., and Kauke, O., deterioration of materials due to [human] sweat, A., III,

Priestley, W.J., chromium and its alloys, B., 575.

Prieur, M. See Launoy, L.

Prileshaeva, N. A., and Terenin, A., free radicals in dissociation of gaseous metal alkyls by light, A., I, I45. See also Terenin, A.

Primakoff, H., additional interaction of protons with an electromagnetic field, due to presence of electron-neutrino field, A., I, 441.

See also Johnson, M. H., jun.

Priman, M., brown coal from the Meldzere district of Courland, B., 743.

Primrose, J. See Crawford, A. B. Prince, A. L., [determination of] nitrogen

[in fertilisers], B., 956.

and Toth, S. J., effect of phosphates on cation-exchange capacity of certain soils, B., 165. Electrodialysis and cation-exchange of soils of varying organic matter content, B., 594. See also Blair, A. W.

Prince, R., and Reichstein, T., synthesis of d-xylosonic acid, A., II, 85.

Princivalle, E. See Gastaldi, C.

Prindle, B., microbiology of textile fibres. VI. Relative humidity over aqueous glycerol solutions, B., 1318.

Pringle, E. M., and Barott, H. G., effect of incubation temperature on time of death of chick embryo, and relation of energy metabolism to mortality, A., III, 308.

See also Barott, H. G.

Pringle, G. E. Soe Mohr, C. B. O.

Pringle, J., south of Scotland [geology], A., I, 206.

Pringsheim, E. G., assimilation of different organic substances by saprophytic flagellates, A., III, 99. Physiology of saprophytic algae and flagellates. I. Chloro-gonium and Hyalogonium. II. Polytoma and Polytomella, A., III, 499.

Pringsheim, P., absorption spectrum and photochemical sensitising action of uranyl sulphate in aqueous solution,

A., I, 574.

and Vogels, H., influence of viscosity and solvent on degree of polarisation of fluorescence, A., I, 346.

Prinkmann, K. J. See Efremov, N. N. Prins, H. J., synthesis of polychloro-compounds with aluminium chloride. III. Condensation of chloroethanes with chloroethylenes. IV. Condensation of hexachloropropylene with s-dichloroethylene, A., II, 174, 438.

Prins, J. A., diffraction by amorphous substances, A., I, 119.

Prins, K. See Hebley, H. F. Prior, H. D. See Amberg, C. R.

Prior, P. H., importance of the ink film in

printing, B., 589.

Priou, R. See Dufraisse, C.

Přistoupil, V., multistage [ore] roaster for testing purposes, B., 927. Preparation of zine chloride by thermal chlorination, B., 1335.

Pritchard, H., Wilkinson, Harry, Edisbury, J. R., and Morton, R. A., discrepancy between biological assays and other methods of determining vitamin-A. II., A., III, 153.

See also Morgan, R. S.

Pritchard, R. R. See Bradfield, A. E. Pritchard, W. N., jun. See Shreve, R. N. Pritchett, C. G. F., bitumen plastics, B., 942.

See also Pritchett & Gold & E.P.S. Co. Pritchett & Gold & E.P.S. Co., Ltd., and Preston, K., [electrode plates for] electric storage batteries, (P.), B.,

and Pritchett, C. G. F., electric storage batteries, (P.), B., 694.

Pritzker, J., and Jungkunz, R., fat of the white mouse (Mus musculus albinus), A., III, 339. Swiss strawberry-seed oil, A.,
III, 410. "Karkade tea," B., 1132.
Privinsky, F. See Frank, K. Probst, O. See Wieland, H.

Probstner, A. von, hormones of the corpus luteum system, A., III, 74.

Proca, A., photons and particles of puro charge, A., I, 6. Wave theory of positivo and negative electrons, A., I, 274.

Proca, G., lysogenic modification of bacteria, A., III, 227. Active principles of lysogenic filtrates, A., III, 251.

Prochownick, V. See Subbarow, Y.

Procopiu, S., ideal magnetisation of a crystal of iron, A., I, 227. E.m.f. of movement and of shock of metals in water and solutions and their relation to electrokinetic potential, A., I, 365.

and Vasiliu, G., discontinuities of magnetisation in an alternating field; explanation of multiple frequencies appearing during "ferro-resonance," A., I, 227. Torsion in an iron or nickel wire facilitates discontinuities of magnetisation with an axial alternating current, A., I, 290.

Procter & Gamble Co., continuous distillation of higher fatty acids, (P.), B., 153. Hydroxy-sulphonated fatty acid esters [wetting, etc., agents], (P.), B., 213. Continuous countercurrent hydrolysis of fat, (P.), B., 1368.

See also Ellis, C., Ferguson, R. H., Reed, $R.\ M.$, and Snoddy, $A.\ O.$

Proetor & Schwartz, Inc., drying of plastic or semi-plastic material, (P.), B., 301. Proebsting, E. L., behaviour of ammonium

fertiliser with special reference to the almond, B., 601.

Proffitt, M. J., Bogan, J. A., and Jackson, R. F., dimensions of Jerusalem-artichoke cossettes, B., 183.

Prohaska, J. van, Dragstedt, L. R., and Harms, H. P., relation of pancreatic juice to fatty infiltration and degeneration of liver in the depancreatised dog, A., III, 279.

See also Dragstedt, L. R., and Harms, H. P.

Prohl, V. See under Briske & Probl. Proisl, J. See Abel, E.

Prokin, S. See Makarov-Semljanski, J. Prokochev, V. N., and Ustiushanina, E. M., effect of potassium fertilisers on grain cultures, B., 822.

Prokofiev, A., torch ion counter, A., I, 535. Distribution of rubber in rubber-bearing plants, B., 472.

Prokofiev, M. A. See Botvinnik, M. M. Prokofiev, V. K., application of spectral analysis to investigation of minerals and ores, B., 1354. Prokofieva, E. V. See Turova-Pollak,

M. B.

Prokopenko, F. F. See Udovenko, N. V. Prokopenko, G. S. See Novikov, A. N.

Prokopetz, E. I., destructive hydrogenation of octahydro-anthracene and -phenanthrene, A., II, 184.

and Jeru, I. I., properties of molybdenum-sulphur catalysts, B., 133.

Prolamine Products, Inc. See Hansen,

D. W

Promisel, N. E. See Egeberg, B.Proner, M., occurrence of a heptose in some

species of Polish Sedum, L., A., III, 107. **Pronin**, P. I., heat-transfer coefficients in condensation of nitrogen peroxide under pressure, B., 236. Liquefaction of nitrogen peroxide under pressure; direct production of concentrated nitric acid, B., 539. Ring condenser for nitrosyl gases, B., 1046.

Prosad, K., and Chatterjee, L. M., release of electrical charges from photographic plates and other materials under moderate pressure, A., I, 626.

and **Ghosh**, \hat{B} . N., spreading of liquids on

filter-paper. I., A., I, 301. and Gupta, R. P., ray-displacement refractometer for accurate work, A.,

and Maitra, A. T., intensity and structure changes of the La emission lines of copper and iron on intense cooling of their anticathodes, A., I, 541.

Prosche, G. See Seka, R.

Proschtschin, I. V. See Kagan, G. V. Proschutinski, S. I. See Veinberg, G. J.

Proske, G. See Winkel, A.

Proskurnin, M. See Erschler, B.
Proskurnina, N. F., and Orekhov, A. P.,
alkaloids of Satsola Richteri. III. Optically active salsoline, and isolation of two new alkaloids, A., II, 394. See also Orekhov, A. P

Prost, E., fuel and metallurgical industries of Soviet Russia, B., 858.

Prosvirnina, N. See Deschalit, G.

Proszt, J., size and cataphoretic migration

velocity of disperso particles, A., I, 181. Prot, M., and Goldowski, N., corrosion of magnesium alloys by ethyl petrols, B., 925.

Protasov, P. N. See Charin, A. N.

Protection & Extinction, incorporating to a stream of fluid under pressure other fluid or powdered bodies, (P.), B., 308.

Proudley, C. E. See Walker, S.

Provocst, M. See Arthus, A. Provocov, V. See Shuravlev, V.

Prshevalski, E. S. See Tarasevitsch, N. I. Prucha, M. J., chemical sterilisers for dairy use, B., 1399.

Pruckner, F., and Stern, A., absorption spectra of pyrrole colouring matters (pyrromethenes and bilirubinoids), A., 1, 548.

See also Stern, A.

Prudhomme, R. O., rôle of carbon dioxide in certain properties of blood-serum, A., III, 5.

Prüfer, G., continuous tar distillation in a pipe still, B., 516.

Prüfer, H., impregnated fibrous products, B., 1331. [Phenol-aldehyde moulded] compositions, (P.), B., 1374.

Prüss, M., sludge-digestion tank, (P.), B.,

and Blunk, H., separation of substances from a stream of liquid, (P.), B., 1288. Pruitt, H. H. See Pfau, G. M.

Prundeanu, I. I. See Longinescu, G. G. Prunell, A., preparation of colloidal gold

by the Borowskaya process; results in neuro-syphilis, A., I, 181. Pruschinina-Granovskaja, V., nature of

electrical conductivity of solid dielectrics in strong electric fields. II. Mica at high field strengths, A., I, 396.

Prutton, C. F., and Lubri-Zol Development Corp., lubricating composition and method of lubricating and improving the lubricating properties of oils, (P.), B.,

Prutzman, P. W., and Socony-Vacuum Corp., electrical dehydration [of oil], (P.), B., 15, 1230.
Pryce, M. H. L., neutrino theory of light,

A., I, 278.

Pryde, A. W. See Ludlam, E. B. Prytherch, H. F., and Koehring, V., opening of bivalves, (P.), B., 1266.

Prytherch, J. C. See Macnaughtan, D. J. Prytherch, W. E. See Houghton, J. L.Prytz, M., behaviour of beryllium chloride and beryllium fluoride in aqueous solutions, A., I, 241.

Przeborski, A., fine structure of absorption bands of tellurium, A., I, 540.

Przedpelski, S. Sce Broniewski, W. Przemetzki, V. Sce Nenitzescu, C. D. Przibram, K., fluorescence of bivalent rare

earths, A., I, 220. Fluorescence of fluorite. V. Fluorescence of europium dichloride and alkali halide-europium phosphors, A., I, 220.

See also Haberlandt, H.

Przybyszewska-Sporzyńska, K., detection of diacetyl in edible fats, B., 584.

Przylecki, S. J. von, properties of proteins as function of fine structure, A., II, 128. Classification of biological colloids, A., III, 253. Regulation of chemical processes in the organism, A., III, 480.

and Hofer, E., artificial "lipo-proteins,"

A., III, 87.

and Kasprzyk, K., compounds of aminoacids with organic (especially fatty) acids. I., A., II, 8. Separation of amino-acids, A., II, 172.

and Kolaczkowska, M., nature of compounds of tyrosine with polysacchar-

ides, A., II, 328.

Pschenitzin, N. K., new type of complex formation of iridium, A., I, 259.

and Krasikov, S. E., oxidation of iridium sulphide by nitric acid, A., I, 629.

Pschenova, K. See Kizel, A.

Psenicka, E., insets for diffusers [for beet cossettes], B., 1109.

Ptitzin, S. V., gas evolution from tungsten

on heating in vacuo, A., I, 24. Ptschelin, V., emeraldin sols. III. Influence of acidity of the liquid during oxidation of aniline on the dispersity, colour, and amount of oxidation products. IV. Dependence of the stabilising capacity of gelatin on acidity of the solution in the oxidation of aniline, A., I, 133, 183. "Hydrophoby" of the hair, A., III, 119.

and Faizulina, A. C., ballistic method of determining p_H with a glass electrode,

A., I, 582.

Ptschelintzev, D. A., rapid determination of phosphorus in bronzes, B., 1064.

Pucci, D. See Fester, G.

Puchalik, M., dipole moment and chemical

structure, A., I, 12.

Pucher, G. W., Clark, H. E., and Vickery,
H. B., organic acids of rhubarb (Rheum hybridum). I. Malic acid of rhubarb and tobacco leaves. II. Organic acid composition of the leaves, A., III, 161.

Wakeman, A. J., and Vickery, H. B., metabolism of organic acids of tobacco leaf during culture, A., III, 366.

See also Vickery, H. B.

Puchta, G. J. See Fessler, C. H. H. Püngel, W., local martensite formation in steel wire, B., 682.

Puening, F., coking apparatus, (P.), B.,

Putter, R., and Dilthey, W., heteropolarity. XXX. Oxidation and reduction products of tetracyclone, A., II, 463.

Puetti, L. A. See Vosburgh, W. C. Puetz, H. H. See Knight, O. D.

Pnffeles, M., Mediterranean red soils, B.,

Menchikowsky, F.

Puffett, W. W., and India Rubber, Gutta Percha, & Telegraph Works Co., primary electric [dry] cells, (P.), B., 55.

Pugh, C. E. M., and Quastel, J. H., oxid-

ation of aliphatic amines by brain and other tissues, A., III, 129. Microdetermination of ammonia in presence of aliphatic amines, A., I, 197.

Pugh, \bar{E} . C., dry cleaning, (P.), B., 539. Pugh, E. M., applications of physics to air conditioning, B., 297.

Pugh, J. D., metallurgical furnace, (P.), B., 454.

Pugh, W., complex fluorides of gallium and the alkali metals, A., I, 473.

See also Sebba, F. Pugsley, L. I., variations in vitamin-A content of grayfish (Squalus sucklii) liver oil, B., 807.

Pukall, W., natural and synthetic plastic earths, B., 1205.

Pukirev, A. G. See Roshdestvenski, M. S. Pukli, F. M., solid fuel briquette, (P.), B.,

Puleston, P. R. See Brough, A. F. Pulfrich, M., optical study of some magnes-

ium silicate ceramics, B., 1051. See also Hecht, H. Pulkki, L. H., production of bacterial

growth stimulants by yeast, A., III, 33. Pulleu, A. N. D., and Brit. Aluminium Co., surface treatment of aluminium and its alloys, (P.), B., 253. Surface treatment of metal articles, (P.), B., 1229.

Pullin, V. E., second report of the Steel Castings Research Committee. VI. Present position of radiological examination of steel castings, B., 45.

Puls, J. H. See Texas Co. Pultz, L. M., relation of nitrogen to yield of sugar-beet seed and to accompanying changes in composition of the roots, B., 1104.

Pulverfabrik Skodawerke-Wetzler Akt .-

des., purification of crude phosphoric acid, (P.), B., 1201.

Pummerer, R., and Richtzenhain, H., caoutchouc. XVIII. Various caoutchouc ozonides and existence of Harries' primary ozonide, A., II, 253. See also Gündel, W.

Pumplin, G. G. See Pearce, J. N.

Puntambekar, S. V., and Krishna, S., oil from seeds of Ximenia Americana, Linn.; new unsaturated fatty acid, ximenic acid, B., 1233

Puppel, I. D., and Curtis, G. M., calcium and iodine metabolism in thyroid disease, A., III, 102.

See also Curtis, G. M.
Purcell, E. M. See Hebb, M. H.

Purcell, R. H., and Zahoorbux, F. D., kinetics of decomposition of carbonyl selenide on an allotropic selenium surface, A., I, 418.

See also Anderson, J. SPurdie, D. See Mann, F. G.

Purdon, A. O., resistance of cements to corrosion by water containing calcium sulphate, B., 553. Blast-furnace slag cements, B., 1344.

Purdne Research Foundation. See Nelson, R. E.

Pure Calcium Products Co. See Church, J. W.

Pure Oil Co. See Chittick, M. B., Oster-strom, R. C., Bidgway, C. M., Smith, Clyde L., Wagner, C. R., and Watson, C. B. \cdot

Puffeles, M. See also Baker, G. W., and Puri, A. N., dispersion of soil for mechanical analysis by sodium carbonate or sodium oxalate treatment, B., 164.

and Anand, B., electrical salinometer for determining soluble salts in soils and irrigation waters, B., 1383.

and Hoon, R. C., electrodialysis of soils. I. Electrodialysis by the rotating cathode, B., 705.

and Sarup, A., use of collapsible tubes for storing soil samples for moisture determinations, B., 1097. Destruction of organic matter in pretreatment of soils for mechanical analysis, B., 1249.

Puri, M. L. See Bhatnagar, S. S.
Pursell, L. See Heller, V. G.
Purves, C. B., and Hudson, C. S., analysis
of fructoside mixtures by means of invertase, V. Methylated and acetylated derivatives of crystalline a-mcthyla-benzylfructofuranoside. Methylated and acetylated derivatives. of crystalline β -benzylfructopyranoside, A., IĬ, 86, 369.

Purviance, K. See Mether, S. R. Purvis, O. N. See Gregory, F. G. Puryear, O. P. See Texas Co.

Pusch, R., improvements in metallurgical microscopes, B., 574.

Puschner, M., thermal diffusion in gas

mixtures. II., A., I, 506.

Pushin, N. A., binary systems containing AsBr₃, A., I, 307.

and Mitie, R. V., compounds of carbonyl chloride with hexamethylenctetramine, m-toluidine, and ethylenediamine, A., II, 488.

and Radoičić, M., binary systems of alkali nitrates, A., I, 412.

and Rikovski, I. I., phase diagrams of binary systems of guaiacol and amines and of benzylamine with phenols, A. II, 495.

Pussard, R., [control of the] lavender moth. (Sophronia humerella, Schiff), B., 1390. Mobile laboratory for low-pressure fumigation of plant products, B., 1391. Putnam, M. E. See Dow Chem. Co. Putnam, T. J., and Merritt, H. H., anti-

convulsant properties of some phenyl derivatives, A., III, 308.

Putnina, C. See Zarins, E. Putschkov, P. V., destructive hydrogenation of petroleum products, B., 749. Destructive hydrogenation, B., 1004.

and Nikolaeva, A. F., berginisation at low temperatures. I. Removal of sulphur from petroleum residue by hydrogenation under pressure, B., 516. Low-temperature berginisation, B., 750.

Putt, E. B., acetylsalicylic acid composition, (P.), B., 1270. Acetylsalicylic acid composition, (P.), B., 1408.

and Theaman, H., dentifrice, (P.), B., 1282.

Puttick, A. See Whessoe Foundry & Eng.

Putzeys, P., and Brosteaux, J., refractive index of proteins, A., III, 8.

Putzillo, V. G. See Stadnikov, G. L. Puutula, K. See Simola, P. E.

Puxeddu, E., anthracene and cyclobutane structures for polymerides of diisoeugenol, A., II, 58.

and Rattu, (Signa.) A., isoeugenol and its polymerides. I., A., II, 58.
Puzanov, V., and Ivanova, G., conversion

of cottonseed oil into a lard-like fat mixture by conjugated hydrogenation, B., 584.

Puzikov, D. N., action of composite fertilisers on sugar beet, B., 377.

Puzireva, V. P. See Nesmejanov, A. N. Puzitzki, K. V. See Pantschenkov, G. M. Pybus, F. C., and Miller, E. W., effect of 1:2:5:6-dibenzanthraceno on spontaneous mouse tumours, A., III, 256.

Pye, D. R., metallurgy and the aëroengine, B., 1223.

Pyhälä, E., cause of rapid ageing of steamturbine oils, B., 11. Cause of rapid resinification of compressor oils in freezing plants, B., 408. F. Fischer method of synthetic gasoline manufacture in Germany, B., 641. Preparation of solvent-containing soaps, B.,

Pyke, M. A., chemical determination of vitamin- B_1 in food-stuffs and biological material by means of the thiochrome reaction, A., III, 495.

Pyl. G., second form of the virus of foot

and mouth disease, A., III, 71. Pyle, G. R. See Carpenter, L. V.

Pyle, J. J., Fisher, J. H., and Clark, R. H. effect of physiologically important materials on kidney-phosphatase, A.,

Pyle, S. I., and Huff, C. E. [with Davis, R.], use of three-day periods in human metabolism studies; calcium and phosphorus,

A., III, 262. Pyman, F. L., chemotherapy, A., III, 399. See also Boots Pure Drug Co.

Pyne, G. T., and Ryan, J. J., molecular constant for soured milks, B., 1260.

Pyridium Corporation. See Renshaw, R. R. Pyriki, C., determination of resins in tobacco, B., 287. Determination of soluble carbohydrate in tobacco, B., 619. Nicotine of cigarette smoke, B., 840. Tobacco smoke, B., 1267.

Pyroxylin Products. See Kratz, E. M. Pyzel, D. See Bataafsche Petroleum Maats., and Shell Development Co.

Q.

Quadt, U. von, Weibke, F., and Biltz, W., affinity. LXXII. Compounds of sodium and potassium with gold, A., I, 371.

See also Biltz, W.

Quagliariello, G., metabolic activity of renal tissue, Λ ., III, 16.

and Cedrangolo, F., synthetic action of lipase in adipose tissue, A., III, 481.

Quain, E.J. See Quain, J.R.Quain, J.R., and Quain, E.J., electric-

discharge tube, (P.), B., 1231. Quaker Oats Co. See Isenhonr, L. L. Quarendon, R., automatic control in the chemical industry, B., 1283.

Quarrell, A. G., structural changes during growth of metal films, A., I, 399.

Quartaroli, A., mechanism of action of aqueous solutions of acids on metals, A.,

Quartzlampen Ges.m.b.H., apparatus for testing objects with filtered ultra-violet

rays, (P.), B., 363.
Quass, F. W. See Vogel, J. C.
Quastel, J. H., enzyme formation in
bacteria, A., III, 274.

See also Clark, A. J., Hawking, F., Jowett, M., Mann, P.J. G., Penrose, L., and Pugh, C. E. M.

Quatram, F. See Stackelberg, M. von.

Quelet, R., and Allard, J., synthesis of methoxymethylbenzyl alcohols, A., II, 146. Chloromethylation of anisaldehyde; conversion into 4-methoxy-3hydroxymethylbenzaldehyde, A., II, 422.

Allard, J., Ducasse, J., and Germain, (Mlle.) Y., synthesis of methoxybenzyl

alcohols, A., II, 339.

and Paty, M., preparation of 5-bromo-2-methoxybenzyl alcohol and 5bromo-2-mcthoxybenzaldehyde, A., II, 414.

Queneau, A. L. J. See U.S. Steel Corp. Queneau, B. R., and Dowdell, R. L., casehardening of steel by direct transformation of austenite, B., 1352.

Quentin, A., tempering of glass sheets, (P.), B., 1206.

Queret, Y., and De Sacy, D., Woodall-Duckham retorts, B., 1293.

Quetel, R., evolution of different forms of phosphorus [compounds] during forcing of the lily-of-the-valley, A., III, 284.

Quevauviller, A. See Régnier, J. Queville, S. See Randoin, L. Quevron, L. See Roure, R.

Quick, A.J., coagulation defect in peptone shock: antithrombins, A., III, 166. Is heparin an antithrombin? A., III, 166. Coagulation defect in sweet cloverdisease and in the hemorrhagic chick disease of dietary origin: source of prothrombin, A., III, 381.

Quick, C. R., chemical control of harmful fungi during stratification and germination of seeds of Ribes noezli, B., 1103.11.11

Quiggle, D., and Fenske, M. R., vapourliquid equilibria of methylcyclohexanetoluene mixtures, A., I, 607.

Tongberg, C. O., and Fenske, M. R., reliability of common types of thermocouples, B., 855.
Quigley, T. B. See Pijoan, M.

Quilico, A., action of halogen acids on arylazoformamidoximes [arylazocarboxylamidoximes], A., II, 187.

Quill, L. L., and Robey, R. F., rare-earth metals and their compounds. Binary system hexahydrated lanthanum and magnesium nitrates, A., I, 412.

Robey, R. F., and Seifter, S., rare-earth metals and their compounds, A., -I,

Quimby, O. T. See Sherman, A. Quimby, S. L., and Siegel, S., elastic constants of crystalline sodium at 80° k, A., I, 605.

Quin, J. I. See Rimington, C.

Quinet, (Mlle.) M. L., compounds of magnesium chloride with organic compounds; compounds with magnesium acctate and ethyl acctate, A., I, 256.

Quinlivan, Q. L. See Brit. United Shoe Machinery Co.

Quinn, A., and Young, J. A., jun., minerals and associated rocks at Copper Mine Hill, Rhode Island, A., I, 483.

Quinn, R. G., and Internat. Paper Co., fireproofing [of boards], (P.), B., 129. See also Campbell, John.

Quinquaud, A. See Cheymol, J. Quintin, (Mile.) M., potential of copper in solutions of copper benzenesulphonate, A., I, 187. Hydrolysis of copper

benzenesulphonate, A., I, 319.
Quinton, J. T., milk distribution, B., 387.
Quirke, T. T. See McCabe, L. C. Quist, W., [pyrene syntheses,] A., II, 491.

Quitmann, E., determination of traces of hydrogen sulphide in the air, A., I, 424. Quittner, F., electrical conductivity of real dielectrics at high field strengths, A., I,

Quitzow, H. W., pumpellyite, a common

hydrothermal and secondary mineral in basic rocks, A., I, 384.

Quixano-Iffia d'If, C., apparatus for generation of producer gas, (P.), B., 1158.

Quodling, F. M. See Mellor, D. P. Qureishy, A. M. See Hunter, R. F.

Qureshi, M. See Nehra, V. Qvist, W., hydrates. II. Sodium acetate, A., II, 319.

R.

Raab, A., possible applications of perchloric acid in iron works laboratories, B., 793.

Raab, J., road surfaces, (P.), B., 1346.
Raab, W., action of intravenous trypsin, carcinolysis, and serum-protein complex, A., III, 299.

Raap, A. van. See Herrmann, W. O.

Rabaglia, E. See Sborgi, U. Rabald, E. See Voss, H. E.

Rabaté, J., biochemical study of Salicacea; Salix daphnoides, Vill, A., III, 51. Gaultherioside (ethylprimveroside); bio-

chemical synthesis, A., III, 190.
Rabbeno, A., true glucosides of Digitalis lanata. I. Comparative toxicities, A., III, 28. Combined effect of local anæsthetics. I., A., III, 390. Rabbitt, J. A., metals suitable for the food-

industry, B., 1220. and Fujiwara, *Tadayoshi*, high-strength cast-iron, B., 43.

Rabi, I. I., Kellogg, J. M. B., and Zacharias,

J. R., sign of magnetic moment of the proton, A., 1, 546. Rabinovitsch, A., and Muromtzeva, V., acid

tar as a hydrolytic agent for fats, B., 57. and Osenova, T.; refining naphthenic acids, B., 876.

Rabinovitsch, A. J., and Peissachovitsch, S. S., theory of photographic develop-ment. III. Adsorption model of the latent image and its development, A., I, 39.

See also Deschalit, N. M., and Passinski, A. G.

Rabinovitsch, B., structure of cotton fibres in the dark [microscope] field, A., III, 333. Rabinovitsch, B. V., determination of the coefficient of expansion of glass from curvature of a double thread, B., 439.

Rabinovitsch, C. J., half-element for electrometric measurements, A., I, 267. Apparatus for reducing and titrating solutions without access of air, A., I, 332. Potentiometric determination of molybdenum in ferromolybdenum, B., 1063. and Ozolina, M. V., apparatus for direct

titration of reduced solutions, without access of air, A., I, 536. Apparatus for reduction of solutions and their potentiometric titration, A., I, 536.

Rabinovitsch, E., recombination velocity of free atoms, A., I, 116. Collision, co-ordination, diffusion, and reaction velocity in condensed systems, A., I, 568.

and Weiss, J., reversible oxidation of chlorophyll, A., I, 629. Reversible oxidation and reduction of chlorophyll, A., II, 122.

Sec also Porret, D.

Rabinovitsch, I. M., Foster, J. S., Fowler, A. F., and Corcoran, A. C., protaminezinc-insulin and other mixtures of zinc and insulin in diabetes mellitus, A., III, 205.

Fowler, A. F., and Corcoran, A. C., protamine and insulin in treatment of diabetes mellitus, A., III, 230.

and Smith, F. C. [with Bazin, E. V., and Mountford, M.], metabolism of Eskimos in the Canadian eastern Arctic, A., III, 208.

See also Corcoran, A. C.

Rabinovitsch, J., rotatory magnetic polarisation and magnetic birefringence of acetone and nitrobenzene solutions of 7-nitronaphthalene, A., I, 13. Rotatory magnetic polarisation and magnetic birefringence of solutions of β -naphthol and 2-methylnaphthalene, A., I, 23. Magnetic rotation and magnetic birefringence of benzene derivatives, pure and in solution, A., I, 66.

Rabinovitsch, M. A., electrotitration of acids in benzene solution, A., I, 529.

Sce also Zilberfarb, M.I.Rabinovitsch, M.S. See Aschkinazi, J.V.

Rabinowicz, M. See Giroud, A.
Rabotnov, S. N. See Banov, A. V.
Rabovski, G. V., Levina, E. P., and
Kuprianova, A. I., rapid determination of citrate-soluble P2O5 in superphosphate, B., 664.

Race, E. See Masson, I.

Rachlina, M. See Klebanski, A. L. Rachlina, S. S., and Plechan, M. I., optimum conditions of wool scouring, B., 1318.

Rackow, W. A. K., means for transferring liquefied gases, (P.), B., 997.
Radasch, A. H. See Barrett Co.

Radeliffe, E. E. See Union Carbide &

Carbon Corp.
Radecker, W. See Roesch, A., jun.

Radeff, T., storage of carbon particles in the reticulo-endothelial system and hæmoglobin formation, A., III, 110. Inorganic phosphorus content of protein of eggs of different ages, B., 181.

Radeloff, H. See Bredemann, G.

Rademacher, dust prevention in the refractory industry, B., 913.

Rademacher, B., and Glaeser, H., prevention of heath disease on soils deficient in copper by treatment with low-grade copper ores or residues from working

them, B., 1386. Radestock, H., advances in production of artificial silk and cellulose wool, B., 423. Radetsky, M. H. See Stein, H. B.

Radiant Heating, Ltd., and Docking, A., refractory bricks or radiants for surfacecombustion burners, (P.), B., 551.

Radio-Akt.-Ges. D. S. Loewe, highly ohmic resistances, (P.), B., 150. Finely-divided metallic layers, (P.), B., 459.

Radio Corporation of America, cathodes for electron-discharge devices, (P.), B., 937.

De Boer, J. H., Bruynes, J., and Teves, M. C., photo-electric tube, (P.), B., 56. and Gallup, J. L., ceramic object [of alumina], (P.), B., 39.

Geel, W. C. van, and De Boer, J. II., electrode system [for electrolytic condenser], (P.), B., 460.

Geel, W. C. van, and Emmens, H., electrolytic condenser, (P.), B., 255.

Gefficken, H., and Richter, Hans, photoelectric tube, (P.), B., 56.

Radio Corporation of America, and Miller, H. J., carbon-coated objects, (P.), B., 1300.

and Pipper, A. L., electron-discharge device, (P.), B., 694.

and Wagenhals, E. R., thermionic cathode heater, (P.), B., 694.

Radischtschev, V. P., double decomposition in absence of a solvent. XXXII. Stable complex of quinary mutual systems of nine salts, A., I, 82.

Radley, J. A., testing by fluorescence, B., 1327.

Radoičić, M., influence of solvent on absorption spectrum of neodymium acetylacetonate, A., I, 393.

See also Pushin, N. A. Radsma, W., reaction of fatty materials of blood with acetic anhydride and sulphuric acid, A., III, 112.

Klerks, J...V., and Everse, J...W. R., mineral metabolism in inhabitants of the tropics, A., III, 93.

Radtke, G., coating electrolytically iron and iron alloys with firmly adherent and impermeable films or layers of metal or metals, (P.), B., 253.

Radtschenko, I., electrochemical oxidation of n-butyl alcohol. I., A., I, 419.

See also Danilov, V.

Radtschenko, O. A. See Orlov, N. A.

Radu, I. F., intake of nitrogen, phosphate, potassium, calcium, and magnesium by maize varieties, B., 598.

Rădulescu, D., and Tilenschi, S., discontinuous step-like change of vapour pressure of substances adsorbed in capillaries, and measurement of molecular diameter, A., I, 458.

Radulov, A. F., apparatus for complete analysis of gases, B., 313.

Radushkevitsch, L. V., kinetics of aërosol coagulation by the diffusion method, A., I, 304. Coagulation coefficient of ammonium chloride smokes. A., I. 614.

Rae, J. J., organic phosphates of urine, A., III, 417.

Rädeker, IV., properties and workability of clad [steel] sheet, B., 561. Influence of high temperatures on alloyed and non-alloyed materials for superheater tubes, B., 680.

and Schöne, E., properties of large composite [metal] sheets, B., 50.

Raether, H., investigation of the electron avalanche with the cloud chamber, A., I, 541.

See also Flegler, E.

Rafalovitsch, T. N., effect of cold-deformation and annealing on properties of chromium-molybdenum steel tubes, B., 680.

See also Natschalnui, A. I. Raff, R. See Dostal, H.

Raffa, (Signa.) L. See Oddo, B.

Raffold Process Corporation. See Rafton, H. R.

Raffy, A. See Randoin, L.

Raisky, H. A., Bernhard, A., and Rohdenbnrg, G. L., hypertension. I. Production of experimental hypertension; correlated effect on nitrogen distribution in blood-proteins, A., III, 23.

Rafton, H. R., and Raffold Process Corp., paper, (P.), B., 230, 536, 1324. [Calcium-magnesium carbonate] pigments, (P.), B., 1374.

Ragatz, E. G. See Union Oil Co. of California.

Ragg, M., anticorrosive paint, (P.), B., 471. Rusting and rust-protective paints, B.,

Raghavachari, T. N. S., and Iyer, P. V. S., methylene-blue reduction test for distinguishing between coli and aërogenes types of lactose-fermenting organisms in water and fæces, A., III, 317. Comparison of certain selective media used in water analysis, B., 986.
Raghavendrachar, C. See Ramiah, P. V.
Raginsky, B. B. See Bourne, W.
Ragni, G. See Passerini, M.

Ragno, A. See Talenti, M. Ragonnet, E. L., and Carbonic Co. of America, converter [for carbon dioxide], (P.), B., 36.

Ragsdale, E. J. W., application of stainless steel in light-weight construction, B.,

Raguin, G. A., and Soc. Lumière, kinematograph film in natural colours, (P.),

Rahlfs, E., dependence of breakdown charge [of gas masks] on properties of active charcoal, B., 625.

Rahlfs, P., crystal structure of Ni₃Sn, A., I, 350. New ternary compounds with a

β-brass superstructure, A., I, 456. Rahmilevitsch, S. L. See Iljinski, V. P. Rahn, H. W. See Heinemann, G.

Rahn, O., physicochemical basis of biological radiations, A., III, 132. Chemistry of death, A., III, 143. Substitutes for potassium in metabolism of lower fungi, A., III, 271. See also Foter, M. J.

Rai, K., pharmacological action of coumarin, A., III, 215.

Raices, A. E., determination of blood-urea by enzymic action and direct nesslerisation, A., III, 112.

and Suarez, C. V., renal elimination of bilirubin, A., III, 203. Franke's reaction, A., III, 459.
Raiford, L. C., and Peterson, W. J.,

identification of phenylhydrazones and isomeric pyrazolines obtained from chalkones, A., II, 307.

Raigorodska, R. L., and Binova, E. S., determination of iodine in iodides, A., I, 424.

Railway Service & Supply Corporation, See McKeon, J.J., and Pearce, E.S.

Raine, T., and Vickers, J. B., heterogeneity of steel ingots. III. Oxygen determinations on bath samples from an electric furnace, B., 1349.

See also Rooney, T. E., and Stevenson, W. W.

Raines, A., electrolytic condenser, (P.), B., 255.

Raines, M. See Vanscheidt, A.

Raines, M. M., and Krupkin, A. I., determination of small amounts of cyanide in food-stuffs after fumigation, B., 975. See also Tischtschenko, V

Rainey, R. C., absolute configuration of the naturally occurring a-amino-acids, A., II, 371.

Rainey, J. See Mason, M. F.

Rainwater, E. H. See Behre, C. H., jun. Raisch, W., Fedeler, J. H., jun., and Underpinning & Foundation Co., filter, (P.),

B., 5. and Municipal Sanitary Service Corp.,

filter, (P.), B., 5.
Raisin, C. G. See Ingold, C. K.
Raiski, S. M., evaluation of accuracy of analytical methods, A., I, 475.

Raiski, S. M. Sec also Alexandrov, Z. A., Alifanova, L. A., and Mandelstam, S.L.

Raistriek, H., production of polyhydroxyanthraquinones by moulds, A., III, 484.

Robinson, R., and Todd, A. R., Aspergillus colouring matters. I., A., II, 106.

See also Ashley, J. N., Birkinshaw, J. H., Clutterbuck, P. W., Haworth, W. N., and Topley, W. W. C.

Rait, J. R. See Hay, R., and M'Intosh,

Raitzin, A., microcrystallographic identification of blood spots in situ, A., III, 196.

Raiziss, G. W., Kremens, A. I., and Abbott Labs., vanadium compounds of Nmethylenesulphonic acids of dihydroxydiaminoarsenobenzene and sodium salts thereof, (P.), B., 1135.

and Severac, M., comparative chemotherapeutic studies of arsenoxide (3amino - 4 - hydroxyphenylarsenoxide) and neoarsphonamine, A., III, 137.

Rajagopal, K. Seo Sankaran, G. Rajagopal, T. See Karunakar, P. D. Rajagopalan, R. Seo Iyer, C. R. H. Rajdhan, T. C. Seo Wienhaus, H. Rajevski, V., capture of slow neutrons, A.,

I, 107.

Rajewsky, B., and Inouye, K., effect of a-rays on surviving tissue, A., III, 388.

and Schaefer, Hans, behaviour of colloid systems in ultra-high-frequency electromagnetic fields, A., I, 27.

Rajpal, M. D. See Bhatnagar, S. S.

Rajzman, A., metabolism of nitrogen and sulphur in dietary supplements, A., III, 307.

Rakeśanyi, L. See Szabo, J. Rakestraw, N. W., and Emmel, V. M., determination of dissolved nitrogen in water, A., I, 475.

and Hollaender, A., photochemical oxidation of ammonia in sea-water, A., I,

Rakieten, M. L., Rakieten, T. L., and Doff, S., absorption of staphylococcus bacteriophages, A., III, 275.

Rakieten, T. L. See Rakieten, M. L. Rakitianski, I. V. See Koblianski, G. G. Rakitin, J. V., absorbent for determination of acetaldehyde, A., II, 228. Rakitin, P. M. See Juriev, J. K.

Rakovski, E. V., and Voznesenskaja, E., producer tar from wood, B., 10. Rakshit, J. N., scent factor of flowers, B.,

1133. Rakshit, P. C. Soe De, S. C., and Ghosh,

Ralea, R. See Cernatescu, R.

Raleigh, W. P., and Bonde, R., secdpotato treatment for Rhizoctonia control in north-east Maine, B., 74.

Rall, H. T., and Smith, H. M., physical and chemical properties of petroleum fractions. II. Relations between mol. wt. and concentration in dilute solution, B., 107.

See also Smith, H. M.

Ralli, E. P., Brandaleone, H., and Mandelbaum, T., effect of administration of caroteno and vitamin-A in diabetes mellitus. I. Effect of oral administration of carotene on blood-carotene and -cholesterol of diabetic and normal patients, A., III, 123.

Ralli, E. P., Friedman, G. J., and Kaslow, M., excretion test for vitamin-C deficiency, A., III, 283.

Gresser, E. B., and Flaum, G., effect of experimental diabetes on the cornea of dogs; relation to administration of vitamin-A, A., III, 13.

Pariente, A. C., Brandaleone, H., and Davidson, S., effect of carotone and vitamin-A in diabetes mellitus. III. Effect of daily administration of carotene on blood-carotene in normal and diabetic individuals, A., III, 43.

See also Rubin, S. H., and Stueck, G. H. Ralph, S. J., and Aluminium Plant & Vessel Co., formation of electrodes for electrolysis of liquids, (P.), B., 254.

Ralston, A. W., and Armour & Co., coal-tar distillates, (P.), B., 208.

Bauer, S. T., and Armour & Co., hydroxylated carboxylic acids, (P.), B., 213.

and Christensen, C. W., high mol. wt. aryl

alkyl ketones, A., II, 153. Christensen, C. W., and Armour & Co., lubricating oils, (P.), B., 211. Mixed phenoxyphenyl alkyl ketones, (P.), B., 328. Mixed furyl alkyl ketones, (P.), B., 328. Mixed diphenyl[yl] alkyl ketones, (P.), B., 328. Waxing and polishing compositions, (P.), B., 367. Insulating and dielectric material for

electrical apparatus, (P.), B., 1230. Christensen, C. W., Bauer, S. T., and Armour & Co., compositions from coal tar and higher fatty acid chlorides, (P.), B., 208.

Christensen, C. W., Hoffman, E. J., Selby, W. M., and Conquest, V., fatty acid nitriles, amides, and ketones for extreme-pressure lubricants, B.,

Christensen, C. W., and Josh, G., use of mercurated fatty compounds as weedkillers, B., 959.

Christensen, C. W., Selby, W. M., and Armour & Co., lubricating oils, (P.), B., 413.

Harwood, H. J., and Pool, W. O., preparation and cracking of nitriles of high mol. wt., A., II, 329.

Pool, W. O., Harwood, H. J., and Armour & Co., nitriles, (P.), B., 215, 1313. Separation of fatty acids, (P.), B., 525. Lubricating oil, (P.), B., 1165. Penetrating oil, (P.), B., 1165. See also Pool, W. O.
Ralston, O. C. See Fraas, F.

Ram, A., and Dhar, N. R., photopolymerisation of formaldehyde to reducing sugars in vitro, A., II, 367. Ramabhadran, T. S. See Basir, M. A.

Ramage, A. S., Wiley, M., and Smith, O. L., vapour-phase treatment of unsaturated hydrocarbons, (P.), B., 17.

Ramage, G. R., and Simonsen, J. L., caryophyllenes. V. Structure of homocaryophyllonic acid, A., II, 109.

Ramage, W. D., Bender, H., and Great Western Electro-Chem. Co., xanthates, (P.), B., 21.

and Great Western Electro-Chem. Co., process of substitution chlorination, (P.), B., 878.

Ramaiah, K. S., colloid optics. I. Scattering of light by protein solutions. II. Scattering of light by silicic acid sols

and gels, A., I, 240.
Raman, (Sir) C. V., and Rao, B. V. R. acoustic spectrum of liquids, A., I, 293. Ramart-Lucas, (Mme.) P., and Grunfeld, M., spectrochemistry of nitrogenous substances; absorption and structure of amides and imino ethers, A., I,

Hoch, J., and Martynoff, M., absorption and deformation of valency angles in the case of phenylhydrazones, A., I, 217.

Ramaswamy, K. L., refractive indices and dispersions of gases and vapours; substituted methanes and ethane, cyclopropanc, ethylene oxide, and benzene, A., I, 222.

Ramaswamy, S., structure of thin metallic

films, A., I, 226.

Rambaud, M. R., apparatus [for vacuum distillation] with normal ground-glass

joints, A., I, 380. Ramberg, E. G., and Richtmyer, F. K., radiation probabilities, Auger effect, and energy level widths for Au (79), A., I, 436.

See also Richtmyer, F. K.

Ramberg, L., valve to prevent sucking back in wide vacuum tubing, A., I, 50. Crystallisation of melts ("freezingout") and centrifuging as a preparative method in organic chemistry, A., II, 358.

and Samen, E., mechanism of the bromination of aliphatic aa-disulphones in aqueous acid solutions, A., I, SS.

Rambush, N. E. See Power-Gas Corp. Ramchandani, J. R., adsorption of bitumens by road aggregates, B., 1209.

Ramdohr, P., lead glance, schapbachite, matildite, A., I, 384.

Ramesohl & Schmidt Akt.-Ges., centrifugal separators, (P.), B., 99.

Ramiah, K., thickness of bran layers in

rice, B., 79. Ramiah, P. V., effect of muscular work on protein metabolism in ruminants, A., III, 128.

and Raghavendraehar, C., origin of black soils in the Madras Presidency, B., 819.

and Satyanarayana, P., biological values of ragi proteins, B., 609. Ramirez, R. L., and Galan, J. C., treatment

of amœbic dysentery by enterovioform, A., III, 13.

Ramm, W. See Debye, P. Rammler, E., semi-coke for gasification, B., 1153. Power gas from browncoal low-temperature coke. I., B., 1294.

and Breitling, K., measurement of dust in fiuo gas and the dedusting ratio, B.,

See also Bobal, L., and Rosin, P.

Ramon, G., floeculation in mixtures of filtered tetanus bouillon and antitetanus serum, A., III, 115.

Bocage, A., Boivin, A., Mercier, P., and Richou, R., immunising and therapeu-_tic properties of staphylococcus anatoxin purified by trichloroacetic acid in staphylococcus infections, A., III,

Boivin, A., and Richou, R., flocculating and immunising properties of anti-toxins purified by precipitation with trichloroacetic acid, A., III, 6. Anastaphylotoxin purified by means of trichloroacetic acid and the production of the antitoxin in the animal, A., III, 86.

Ramon, G., Boivin, A., and Richou, R., flocculating and immunising properties of diphtheria anatoxin purified by trichloroacetic acid, A., III, 86. Antigenic power in vitro and in vivo of tetanus anatoxin purified by trichloroacetic acid, A., III, 86.

Gernez, C., and Richou, R., immunising action of the staphylococcus anatoxin, purified by trichloroacetic acid, in preventive doses in man, A., III, 86.

Lemétayer, E., and Mustafa, A., rapid and intensive production of tetanus antitoxin, A., III, 197.

Lemétayer, E., and Pirosky, I., variability of properties of tetanus anti-toxin, A., III, 373.

Lemétayer, E., and Richou, R., determination of intrinsic antigenic power of tetanus toxin and anatoxin by flocculation, A., III, 115.

Richou, R., and Rouchdi, M., intrinsic antigenic value and immunising power of staphylococcus anatoxin, A., III,

Ramontianu, E. See Macovski, E. Ramos, J. M. Sec De Jesus, P. I. Ramotowski, E. See Swientosławski, W.

Rampoldt, O. See Meyer, Julius.
Ramsauer, C., limits in high-pressure and vacuum technique, B., 1283.

Ramsauer, R., scattering of X-rays by gaseous alcohols, and limits of applicability of scattering method to [determination of structure of] light molecules, A., I, 225.

Ramsdell, E. G., calcinosis universalis, A., III, 460.

Ramser, E., distillation of crude tar, B., 516. Ramsey, R. J. See Tracy, P. H.Rand, S. J., and Gibbs, A. J., dehydrating

machine, (P.), B., 629.

Randa, E., rapid dichromate method for the determination of glycerol in soaps and spent lyes, B., 942.

Randall, A. See Andrews, J. C.

Randall, E. L. See Gas Light & Coke Co. Randall, H. M., Dennison, D. M., Ginsburg, N., and Weber, L. R., far infra-red spectrum of water vapour, A., I, 495.

Randall, J. T., X-ray study of sulphuric and orthophosphoric acids, A., I, 16. Determination of structure in liquids by X-ray methods, A., I, 117. Luminescence and its applications, A., I, 168. Structure of liquid hydrogen peroxide, A., I, 400. Effects of temperature on intensity of fluorescence of some impurity solids, A., I, 550.

and Rooksby, H. P., identity of structure in liquid lead and bismuth, A., I, 117.

See also Gen. Electric Co.

Randall, W. F., nickel-iron alloys of high permeability with special reference to mumetal, B., 791. Randell, H. C. See Walmsleys (Bury),

Randle, F., cores for radiators or other heat exchangers, (P.), B., 1287.

Randoin, L., and Queville, S., comparative influence of sugars in avitaminosis-A and on an artificially-complete diet on the growth and recovery of the rat, A., III, 152.

and Raffy, A., endocrinological seruminterferometry of normal and scorbutic guinea-pigs, A., III, 292.

Raffy, A., and Aguirrezabala, J., determination of alkaline reserve of normal and scorbutic guinea-pigs, A., III, 114.

Randolph, A., digestion of peptised silver bromide, A., I, 80.

Randolph, A. F., economic and engineering trends in plastics, B., 368. [Trade names of plastic products], B., 1237.

Randolph, D. W., and Gen. Motors Corp., nickel alloy of low gas content [for sparking-plug electrodes], (P.), B., 691.

Rane, M. B., and Kondaiah, K., qualitative analysis without use of hydrogen sulphide, A., I, 327.

Kondaiah, K., and Ratnam, M. K., removal of antimony from its solutions

by nitric acid, A., 1, 48.

Ranganathan, S., effect of cereals on calcium, magnesium, and phosphorus assimilation, A., III, 307. Effect of storage on vitamin-C potency of foodstuffs, B., 976. Vitamin-C content of some Indian foodstuffs, B., 976.

and De, N. K., spectrographic examination of urinary and biliary calculi, A., III, 298.

and Sankaran, G., migration of ascorbic acid (vitamin-C) in an electrical field, A., III, 496.

Sundararajan, A. R., and Swaminathan, M., nutritive value of Indian foodstuffs. I. Chemical composition of 200 common foods, B., 1127.

Ranganathan, S. K., experiments towards synthesis of isofenchono and its degradation products, A., II, 4. Experiments towards the synthesis of isofenchone. I. Synthesis of $\beta\delta$ -dimethylpentane- $\beta\delta\epsilon$ tricarboxylic acid, A., II, 398.

Ranganathan, V., conductometric determination of micro-quantities of arginine,

A., III, 334.

and Sastri, B. N., conductometric method for micro-determination of urea, A., III, 52. Micro-determination of urea in physiological fluids, A., III, 192,

Rangaswami, M., and Sen, H. K., determination of orpiment in shellac, B., 1237.

Rangaswami, S., and Seshadri, T. R., geometrical inversion in acids derived from coumarins. IV. Behaviour of ethers of cis- and trans-acids, A., II, 254. Rangier, M. See Wolff, R.

Rank, D. H., Brillouin effect of benzene as obtained with the concave grating, A., I, 547.

Rank, V., influence of time of running and of drainage on measurements with burettes, A., I, 332. See also Dolch, M.

Rankin, D. A. See Du Pont de Nemours & Co., E. I.

Rankin, R. S., and Dorr Co., water soften-

ing, (P.), B., 630.
Rann, W. H. See Grimmett, L. G.
Ranque, G., and Henry, P., thermalautostabilisation method for creep tests of long duration at elevated temperatures, B., 928.

Henry, P., and Chaussain, M., industrial apparatus for determining thermal conductivities of metals up to 900°, B., 928.

Ransley, C. E. See Smithells, C. J.

Ransom, H., and Edelstein, S. M., lustre determination [of textiles] with a photoelectric photometer, B., 1327.

Ranson, \hat{R} . M., and Zuckerman, S. vaginal p_H in monkeys injected with œstrone, A., III, 361.

See also Baker, J. R. Ranson, W. B., waterproof pavements, roofs, floors, etc., (P.), B., 917.

Ranzi, I., and Ricamo, R., photo-thermionic effect in incandescent metals, A., I, 487. Nature of the electrolytic depolarisation effect with a high-frequency current, A., I, 521.

Rao, A. B., Maxwell effect in some organic

liquids, A., I, 222.

Rao, A. L. S., soil fertility and the rôle of trace elements, B., 1100. Physical and chemical properties of some sugar-cane soils, B., 1388.

Rao, A. V. See Bhagavantam, S. Rao, B. N. See Subbaraya, T. S. Rao, B. R., and Rao, L. R., "bidalotite," a new orthorhombic pyroxene derived from cordierite, A., I, 484.

Rao, B. S., morellin, a constituent of the seeds of Garcinia morella, A., II, 298. and Subramaniam, K. S., β-asarone, A., II, 413.

See also Chobe, M. T., Rao, K. S., Subbaramiah, K., and Subramaniam, K. S.

Rao, B. S. M., fine structure of the Balmer lines, A., I, 157.

Rao, B. V. R., dispersion of sound velocity in liquids, A., I, 353.

See also Raman, (Sir) C. V.

Rao, C. S., constitution of water in solutions of strong electrolytes. II., A., I, 462.

Rao, G. G., and Pandalai, K. M., biological oxidation of ammonia by nitrite formers, A., III, 35.

Rao, H. K. S., and Wheeler, T. S., amidines. II. Diamidines from diimidochlorides derived from diamines, A., II, 493.

Rao, I. M. See Ekambaram, T. Rao, I. R., and Koteswaram, P., low and high Raman frequencies for water, A., 1, 496.

Rao, I. S. See Semerano, G.

Rao, K. A. N., utilisation of [Indian] indigenous raw materials, B., 1077. and Rao, P. L. N., action of sulphuric

acid on glucose and sucrose, A., II, 178. Rao, K. R., and Husain, S., electrodeposition of chromium from potassium di-chromate baths. I. In presence of

chloride and acetate, B., 1069. and Krishnamurti, S. G., spectrum of bromine. I. Structure of Br III, A.,

Rao, K. S., and Rao, B. S., adsorption on gels. I. Comparative study of selective adsorption from binary mixtures of liquids on gels of silica, alumina, and ferric oxide. II. Comparative study of the capillary spaces in gels of silica and alumina, A., I, 129, 510.

Rao, L. R. See Rao, R. R. Rao, M. N., gastric analysis in Indians: study of 100 cases, A., III, 458.

Rao, M. R. A. N., sulphur iodide, A., I,

Rao, M. V. R., cirrhosis of the liver following chronic intoxication with carbon tetrachloride: experimental study, A., III, 301.

Rao, N.A.N. See Subbaraya, T.S.

Rao, N. H. See Joshi, S. S.

Rao, N. K. A. See Singh, B. N. Rao, P. L. N. See Rao, K. A. N.

Rao, P. S., and Seshadri, T. R., reactivity of the double linking in coumarins and related as-unsaturated carbonyl compounds: III. Action of mercuric acetate on coumarinic and coumaric acids and esters, A., II, 255. Rao, P. V. J. See Joshi, S. S.

 ${f Rao}$, S., soft X-rays and photo-electrons from nickel at different temperatures, A., I, 387. Rao, S. N. See Jadhav, G. V.

Rao, S. R., and Muthuswami, N., optical scattering by colloidal suspensions and emulsions, A., I, 237.

and Sriraman, S., paramagnetic susceptibility of lithium, A., I, 352. Diamagnetic susceptibility of some complexions, A., I, 556.

Rao, S. S., effect of gastric juice and of bilo on cyclops infected with guinea-worm larvæ, A., III, 477.

Raonl, Y., synthesis of hordenine, A., II, 125. Determination of tyrosine in vegetable substances, A., III, 162, 368. Biological formation of hordenine, A., III, 305. Evolution of hordenine in barley and final relationship of this alkaloid to tyrosine, A., III, 442. Origin and function of hordenine, A., III, 447. Rôle and origin of alkaloids A., III, 447. See also Gounelle, H.

Rapatz, F., abrasion film and cutting power of ground [steel] parts, B., 563.

Raper, H. S. See Deutsch, W.

Raper, R. See Clemo, G. R.

Raphaël, C., distribution of hamoglobin and its derivatives in tissues of Phyllodoce mucosa, A., III, 110.

Rapkin, D. See Ellis, E. H.

Rapkine, L., chemical processes during cell division. III. Inhibition and re-establishment of cell division, A., III. 483.

Rapoport, I. B., destructive hydrogenation

of quinoline, A., II, 75.

Bliudov, A. P., Schevjakova, L., and
Frantzuz, E., gasolino synthesis from carbon monoxide and hydrogen at atmospheric pressure. I., B., 108.

and Kosolapov, Z. E., low-temperature carbonisation of Cheliabinsk coals.

II., B, 744.

Mintschenkov, M. P., and Konov, V. P. destructive hydrogenation of phenols in a continous apparatus, B., 106.

and Silitschenko, E. I., preparation of lubricating oils by hydrogenation of primary tar from Barzass coals. I., B., 110.

and Sudzilovskaja, M. S., destructive hydrogenation of coal, B., 104.

See also Karavaev, N. M.

Rapoport, S., determination of free and esterified glyceric acid, A., II, 133. Blood glycolysis and phosphoglyceric acid, A., III, 113. State of combination of phosphorus in phosphoproteins, A., III, 168. Phosphoglyceric acid as carrier of blood-phosphorus and its behaviour in experimental ammonium chloride acidosis. I. and II., A., III, 174. Significance of phosphoglyceric acid production in living yeast, A., III, 431. Use of step-photometer in determination of phosphoglyceric acid, A., III, 448.

and Eichinger, W., Voiscnet's tryptophan reaction, A., III, 192. Rapp, A. G. J., and Granath, A. G., Muller-

type mixer, (P.), B., 740.

Rapp, H. V. See Nat. Aniline & Chem. Co. Rappaport, F., Reifer, I., and Weinmann, H., volumetric determination of polyhydric alcohols and reducing aldoses (monosaccharides) by means of periodate, and the determination of periodate and iodate in presence of each other,. I., A., II, 530.

Rappold, H. See Wilton, N. Rappolt, H. G., control of air in [paper-] machine-room ventilation and drying, B., 27.

Rappolt, L. See Baumann, T. Rappoport, E., Kogan, E., Poplavko, N., and Tokarevski, P., malleable cast iron from an ordinary cupola furnace, B., 678. Rappoport, (Mlle.) M. See Bobtelsky,

Mordechai. Rapson, W. S., reactions of ethyl cyclohexanone-2-carboxylate and ethyl cyclopentanone-2-carboxylate with unsatur-

ated methyl kotonos, A., II, 18.

Rare Chemicals, Inc. See Ach, L., and Johannessohn, F.

Rarita, W., and Present, R. D., nuclear two-, three-, and four-body problems, A., I, 391.

See also Motz, L.

Rasch, R., errors in working up fireclay, B., 782.

Rasch, R. A. Seo Richter, G. A. Raschba, E. J., arginase, A., III, 312.

Raschevskaja, S. T., Zilberman, G. B., and Tscherniavskaja, A. D., products of chlorination of phenol, B., 757.

Raschig, F., development of cast phenolic resins, B., 698.

Raschig, K., binding power and viscosity of road tar, B., 40. Raschig, M. See Kemmer, H.

Raschig Ges.m.b.H., F., moulding composi-

tions, (P.), B., 1239.

Raschkovan, B. A., synthesis of aminoacids by condensation of amines with aldehydes and hydrocyanic acid; mechanism of synthesis, and application to synthesis of alkamino-acids, A., 1I, 401.

See also Kiprianov, A.I.

Raschtschektaev, I. N. See Vul, B. M. Raschutin, volumetric determination of copper and nickel present together, A., I, 476.

Rasetti, F., Fink, G. A., Goldsmith, H. H., and Mitchell, D. P., energies of soloctively absorbed neutron groups, A., I, 544.

Raskin, L. D., determination of zinc in coloured alloys by means of hydroxyquinoline, B., 353. Colorimetric determination of phosphorus in steel and iron, involving ether extraction of the phosphomolybdate complex, B., 447.

and Drozd, I. F., volumetric determination of magnesium by the hydroxyquinoline-permanganate method, A., 1, 327. Determination of silicon in cast iron and steel, B., 447.

Rasmussen, E. See Lyshede, J. M. Rasmussen, E. J., five years' storage re-

search on New Hampshire apples, B., 835. Rasmussen, O. V. See Aabye, J. S.

Rasmussen, R., Guerrant, N. B., Shaw, A. O., Welch, R. C., and Bechdel, S. I. effects of breed characteristics and stages of lactation on the vitamin-C content of cow's milk, A., III, 282. See also Guerrant, N. B.

Rasmussen, R. E. H., flow of gases through narrow passages, B., 989.

Rasmusson, J. See Schéele, C. von. Rasorenov, A. S. See Surovtzev, V. V.

Raspopina, A. K., and Krjagova, A. I., treatment of waste from magnesite industry, B., 132. Raspopov, S. I., and Finkelstein, D. N.,

appliance for use in electrometric microtitration and electro-analysis, A., I, 267.

Rasquin, H., necessities, possibilities, and limitations in the paint field [of the German four-year plan], B., 155. Pigmentation of synthetic resin varnishes, B., 1088.

Rassadina, E. N. See Iv, B. T.

Rasselsteiner Eisenwerke-Ges. Akt.-Ges., Remy, J., and Hüttemann, F., pickling of metal sheets, (P.), B., 53.

Rasskazova, T. A. See Kurindin, K.S. Rassudova, N., and Kasatotschkin, structure of mixed chromes, B., 1371.

Rasterniaev, A., determination of oil content of scods by the refractometer, B., 806.

Raszeja, S., presence and partition of sodium between erythrocytes and plasma of blood of man and animals, A., III, 249. Ratanarat, C. See Brintzinger, H.

Ratcliffe, A., sterols and carbohydrates in fungi. I. Boletus cdulis, A., III, 161.

Rath, E., caustic embrittlement of boiler plates, B., 627.

Rath, G., influence of vitamin-D on activity of phosphatase, A., III, 156.

Rath, R., caustic embrittlement of boiler plates, B., 919.

Rathbone, T. C., detection of fatigue cracks [in machine parts] by the Magnaflux method, B., 794.

Rathenau, G., optical and photochemical investigation of phosphorus, A., I, 403.

Rather, J. B., Beard, L. C., jun., Reiff, O. M., and Socony-Vacuum Oil Co., distillate petroleum products and their treatment, (P.), B., 1305.

Rathery, F., variations in blood-sugar and glycogen reserves during experimental uræmia in the rabbit, A., III, 258. Bargeton, D., and De Traverse, P.

effect of blood from depancreatised dogs on blood-sugar of normal dogs, A., III, 53. Effect of human diabetic blood on the blood-sugar of the normal dog, A., III, 89.

Rathje, W., Hess, K., and Ulmann, M., determination of molecular size of dissolved substances on basis of rate of dialysis according to H. Brintzinger, A., I, 459.

Rathsack, K., effect of calcium cyanamide, in comparison with other nitrogenous fertilisers, on plant yields and nitrogen transformations in light soils, B., 596.

Ratliff, A. T., Guice, R. R., and Pine-Felt Corp., decortication of fibrous plants, (P.), B., 1037.

Ratman, F. F., ternary systems: waterm-cresol-benzene and -toluene; determination of water content of m-cresol, A., I, 566. Absorption of propylene and cyclopropane by solutions of sulphuric acid. A., II, 173.

Ratnam, M. K. See Rane, M. B. Ratner, A. P., activity coefficients of nitrate of lead and barium as determined from water vapour pressure, A., I, 362.

Ratner, B., treatment of milk allergy and its basic principles, A., III, 121.

Ratner, E. I., natural magnesium silicates (dunites) as fertilisers for acid soils, B., 166. Influence of exchangeable sodium in soils on growth of plants and on physical properties of the soils, B., 597.

Ratner, S., iron content of teeth of normal and anæmic rats, A., III, 118.

and Clarke, H. T., action of formaldehyde on cysteine, A., II, 124. See also Schoenheimer, R.

Ratnikova, K. I. See Karpuschin, P. P.

Ratovskaja, M. M. See Fedorov, D. A. Ratschevski, A., colloidal solutions of carotone (pro-vitamin-A), A., III, 231. Aqueous colloidal solutions of vitamin-A, A., III, 363.

Ratsimamanga, R. See Giroud, A., and Wollman, E.

Rattu, (Signa.) A. See Puxeddu, E.

Ratzbaum, E. A., quantitative spectral analysis of electrolytic copper for arsenic, antimony, bismuth, tin, lead, and iron, B., 1069.

Rau, M. A. G., dipole moment and structure of pyrones; 2:6-dimethyl-y-pyrone, xanthone, and coumarin, A., I, 221.

and Anantarayanan, N., dipole moment and structure of some cyclic anhydrides: plithalic, succinic, and citraconic anhydrides, A., I, 221.

Rau, S. See Scheunert, A. Raub, E., and Bihlmaier, K., faulty silver [electro]deposits; influence of loading coments and of sulphur on silvering, B., 686.

Klaiber, H., and Roters, H., deoxidation of technical silver alloys, B., 48.

and Schall, A., reaction between molten copper alloys and sulphur dioxide, B., 568.

and Wittum, M., behaviour of lead in nickel[-plating] baths, B., 1358.

Ranch, C. See Winterfeld, K.

Raucourt, poisonous deposits on fruit, B.,

Raudnitz, H., determination of constitution

of ammoresinol, A., II, 383. Lanner, K., and Deutschberger, E., constitution of ammoresinol, A., II, 204.

Rault, J., [sugar cane] milling results as revealed by individual units control,

Ranner, K. M., detection of sulphur lin steel] by the Baumann stain method, B.,

Rausch, A., adsorptive powers of various types of charcoal from the medicinal viewpoint, B., 618.

Rausch, E., correct calculation of evapor-

ation in brewers coppers, B., 829.
Rauschenbach, P., nutrient value of tree shoots, A., III, 127. Comparison of nutritive values of hazel-nut wigs and rye straw for milch cows and sheep, B., 389. Rauschenberger, E. L., detection of

Castle's enzyme in gastric juice of adults and children, A., III, 299.

Rauscher, W. H., micro-, semimicro-, and macro-determination of halogens in organic compounds, A., II, 358. Determination of alkyl- and aryl-halogen in presence of each other, A., II, 529.

Rauschert, B. L. See Nat. Aniline & Chem. Co.

Raut, M. R. See Dastur, R. H. Rautenstrauch, C. See Dane, (Frl.) E. Rauterberg, E., and Kawe, A., mobility of potassium salts in soils, B., 269.

Raux, J., improving the stability of beers, B., 966. Influence of solutions containing diastase on fermentation, B., 1257. Composition of glucoses, B., 1393.

Rava, \hat{A} ., [fused] refractory materials, (P.), B., 673.

Rayazzoni, C. See Contardi, A.

Ravdin, I. S., Eliason, E. L., Coates, G. M. Holloway, T. B., Ferguson, L. K., Gill, A. B., and Cook, T. J., divinyl ether as a general anasthetic, A., III, 266.

See also Drabkin, D. L., Goldschmidt, Samuel, and Riegel, C.

Ravenna, G. See Costa, D.

Ravenswaay, H. J. See Meulen, H. ter. Ravin, A. See Longwell, B. B.

Ravitsch, G. B., dependence of viscosity and density of fats and fatty acids on their iodine values, B., 804.

Ravitsch, M. I., and Troitzkaja, N. B., ice fields of the ternary systems potassium oxide-phosphoric anhydride-water, and ammonia-phosphoric anhydride-water, A., I, 618.

Rawl, E. H., peach tree abnormalities developing from application of nitrogen fertilisers alone, B., 1106.

Rawlings, A. A. See Challenger, F. Rawlings, C. O., colour of apples as affected by weather and cultural conditions, B.,

Rawlins, F. I. G., physics and chemistry of paintings, B., 1238.

Rawlins, G. A. See Morton & Co., Ltd., R. Rawlins, T. E. See Takahashi, W. N. Rawls, W. B. See Chapman, G. H. Ray, A. See Girard, A.

Ray, A. B. See Carbide & Carbon Chem. Corp., and Union Carbide & Carbon Corp. Ray, B. C., constitution of Erdmann's salt. I., A., I, 602.

Ray, G. See Wilson, H. E. C.
Ray, G. B. See Brondum, H. W., and
Roughton, F. J. W.

Ray, J. N. See Bhatnagar, H. C., and Gaind, K. N.

Ray, K. L. See Sen, H. K. Ray, N. N. See Ghosh, B. N.

Rây, P., and Ghosh, A := N., complex

motal-ammonium selenites and selenitomotalammines, A., I, 43.

Ray, P. R., and Dutt, N. K., substituted cyano-cobaltiates. IV. Aquopentacyano-cobaltic acid and its salts, A., I,

Ray, R. C., isomeric compounds of boron, hydrogen and oxygen, A., I, 575. Ray, S. C. See Mitter, P. C.

Ray, Santosh K., gneissic complex of Darjeeling district, Bengal, A., I, 382.

Ray, Susil K., dyes derived from 8-hydroxyquinolinealdehydes and from 2-hydroxyanthraquinonealdehyde, A.,

II, 520. and Majumdar, D., polyhalides. V. Structure of polyhalides, A., I, 446. Ray, W. A. See Jones, G.

Raybestos-Manhatten, Inc. See Novak, I.J.

Raybin, H. W., direct demonstration of sucrose linking in the oligosaccharides, A., II, 369.

Raydt, U., plating of metals and alloys [to form bimetal sheet], (P.), B., 1228.

Rayleigh, (Lord), passage of helium at ordinary temperature through glasses, crystals, and organic materials, A., I, 24. Optical contact, A., I, 302. Surface layer of polished silica and glass: optical contact, A., I, 447.
Raymond, B. IV., technique of section

cutting, paraffin embedding, and staining [of wet and dry hide and leather], B., 1093.

Raymond, C. L. See Hurd, C. B. Raymond, L. See Gay, L.

Raymond, L. C., pasture studies. XI. Pasture research in Quebec; chemical, ecological, and nutritional phases, B.,

Raymond, W. D. See French, M. H. Raymond Brothers Impact Pulveriser Co. See Colby. H. S. See Colby, H. S.

Raymond-Hamet, new alkaloid, formosanine, from Ourouparia formosana, Matsumura and Hayata, A., II, 266. Presence in bark of Corynanthe paniculata, Welwitsch, of a lavorotatory isomeride of yohimbine, A., II, 393. Peripheral vaso-constrictor action of cytisine, a nicotine-like substance, A., III, 425. and Millat, L., mitraphylline, A., II, 217.

Mitraversine, A., II, 266.

See also Bizet, E.

Raynaud, A. See Dobrovolskaia-Zavad-skaia, N. Rayner, H., firestone as a refractory, B.,

1341. Raynor, G. V. See Hume-Rothery, W. Raynor Optical Co., Ltd., Hobson, E. N., and Bateman, A. J., refractometers,

(P.), B., 513. Raytheon Production Corporation. See

Anderson, H. G., and Spencer, P. L. Rayton, W. M., and Wilkins, T. R., Wilson cloud-chamber investigation of the a-particles from uranium, A., -10.4 moVI, 388.

See also King, Allen. With A . remained al Razek, J. See Sunderman, F. W. Razumov, V. K. See Plotnikov, V. A. Razumov, V. M. See Zemlianski, I. I. Rdultovskaja, E. See Belaev, A. F.

Re, P. M. See Castex, M. R. Read, A. E. See Walsall Conduits, Ltd. Read, C. F., and Horn, C. L., halogenation,

(P.), B., 757.

Read, D. N. See Johnson, T. H.
Read, F. See Manlove, Alliott & Co. Read, F. O., ozonising apparatus, (P.), B., 438. Ozonisers, (P.), B., 583.

Read, H. H., Grampian highlands, A., I.

Read, J., and Swann, G., menthone series. XIV. dl-1-Hydroxymenthone, dl-menthano-1:3-diols, and dl-40-neomenthen-3-ol, A., II, 157. Carvone series. IV. Optically active carvotanacetols and carvotanacetylamines, A., II, 157

See also Dewar, J., and Galloway, A. S. Read, J. C. See Brit. Thomson-Houston

Read, J. W., and Haas, L. W., baking quality of [wheat] flour as affected by certain enzyme actions. III. Purified amylase and relative proteolytic activity of amylolytic agents. IV. Potassium bromate and enzyme activity, B., 386, I397.

Read, R. R., and Lambert Pharmacal Co., alkyl ethers of 4-chlororesorcinol, (P.), B., 498.

Read, W. C., and Electro Metallurg. Co., [high-nitrogen ferrochromium] alloys, (P.), B., 250.

See also Electro Metallurg. Co. Read, W. H., control of red-spider mite on carnations, B., 1106.

See also Orchard, O. B. Reade, T. H. See Milton, G. J. G.

Reader, D. See Coombs, II. I. Reagh, J. D. See Parks, G. S.

Reames, H. R. See Lennette, E. H. Reaney, R. J., thermoplastic rubber, (P.),

B., 266. Reantaso, C. G., pungapung as a source of

starch and alcohol, B., 75.

Reardon, A. J., influence of physical development in the region of solarisation, A., I, 471. Pressure effect and physical development, B., 1275 See also Poindexter, F. E.

Reavell, J. A., fluid heat transmission in the food industry, B., 78.

Reavell & Co., Ltd., and Humby, A. J. D., temperature- and other regulating means.

(P.), B., 1287.

Reay, G. A., formaldehyde in marine products, B., 1263.

and Kuchel, C. C., proteins of fish, A., III, 416.

See also Banks, A.

Rebay, A. von. See Helberger, J. H. Reboulet, H. J. See Hochwalt, C. A., and Mead Corp.

Rebrassier, R. E., nieotinised water as a preventive against ascarid and coccoidal invasions of chickens, B., 1391. Receveur, E. See Martin, P. E.

Receveur, R. See Martin, J. F.

Reckers, J. See Durau, F.

Reckitt & Sons, Ltd., and Sargent, E. H. G., compositions for use as moulding powders. (P.), B., 262.

Recknagel, A. See Brüche, E., and Mrowka, B.
Record, P. R. See Bethke, R. M., and

Hunt, C. H.

Reddemann, H., transverse thermo-electric power in single crystals, A., I, 352.

and Strassmann, F., production of a silver isotope of 24 minutes halfperiod by beryllium neutrons, A., I,

Reddi, K. R., biochemistry of Sonti fermentation, A., III, 144.

and Subrahmanian, V., biochemistry of Sonti fermentation, B., 968.

Reddie, J. W. See McFarlan, R. L.

Redding, L. G., phlyctenular disease and vitamin deficiency, A., III, 206.

Reddish, G. F., phenol coefficient of antiseptics, B., 297. Antiseptics; comparative laboratory and practical tests, B., 497. Limitations of the phenol coefficient, B., 1281.

See also Varley, J. C.

Reddish, W. T., and Emery Industries, absorbefacient for dry-cleaning, (P.),

Reddy, A. R., digestion and absorption in the crab Paratelphusa (Oziolelphusa) hydrodromus, Herbst, A., III, 467.

Reddy, C. R. N., and Srikantan, B. S., weighting on Indian silk, B., 1327. Reddy, T. V. See Ayyangar, G. N. R.

Reder, R., determination of lipase in milk, A., III, 120. Vitamin studies, A., III, 495.

and Gallup, W. D., rates of digestion and absorption in avitaminosis- B_1 and $-B_2$, A., III, 153.

Sec also Weaver, E.

Redfarn, C. A. See Schidrowitz, P. Redfern, A. H., and MacCallum, F., dry

batteries, (P.), B., 460. Redgrove, H. S., black-currant flavour, B., 724. Flavouring essences, B., 975. Cholesterol and oxycholesterol as [cosmetic] emulsifying agents, B., Cobalt in cosmetics, B., 1413.

Reding, R., content of amino-acids, polypeptides, non-protein-nitrogen, albumins, globulins, and fibrinogen in cancerous

blood, A., III, 89.

Redlich, O., molecular vibrations and Raman spectrum of deuterium compounds, A., I, 496. Range of validity of Nernst's heat theorem, A., I, 558.

Kurz, T., and Stricks, W., Raman spectra of inorganic compounds, A., I, 598.

Redlich, O., and Tompa, H., determination of the constants of harmonic vibrations. A., I, 445.

and Zentner, J., heat of fusion of mixtures of heavy and ordinary water, A., I, 127.

Redrup, H. G., liquid heating apparatus [geyser], (P.), B., 858. Redslob, F. See Forestier, H. Reeburgh, S. L. See Patterson, W. C.

Reece, R. P., and Turner, C. W., galactin

content of the rat pituitary, A., III, 87. Effect of suckling on galactin content of the pituitary of the rat, A., III, 175. Experimental alteration of galactin content of rat pituitary, A., III, 320. Reed, A. B. See Kenny, W. R.

Reed, A. L., insulating oils, B., 111. Reed, C. E. See Hauser, E. A. Reed, C. I. See Bartoli, A. J.

Reed, D. L., and Clark, K. G., potassium nitrate from potassium chloride and nitrogen peroxide, B., 435.

Reed, E. B. Scc Freeman, R. S.

Reed, F. P. See McGookin, 1.
Reed, G. B. See Boyd, E. M.
Reed, H. C., report of the [American Leather Chemists' Association] Committee on comparative tannin analysis, B., 1247.

See also Deutsch, H.

Reed, H. S., and Parker, E. R., specific effects of zinc applications on leaves and twigs of orange trees affected with mottleleaf, B., 74.

See also Dufrenoy, J. Reed, J. C., accessory minerals in igneous and metamorphic rocks, A., I, 270.

Reed, M. L. See Becker, A. E. Reed, R. E., and Kendall Co., chemical heating compositions and method of chemically producing heat, (P.), B., 629. Chemical heating compositions, (P.), B., 629.

Reed, R. M., and Procter & Gamble Co.,

soap stabiliser, (P.), B., 153. Reed, W. D., and Livingstone, E. M., biology of the tobacco moth and its control in closed storage, B., 1255.

Reel, H., influence of mechanical treatment on electrical properties of iron-nickel alloys, B., 562.

Reerink, E. H. See N. V. Philip's Gloeilampenfabr., and Nierkerk, J. van.

Reerink, W., development of [coal] carbonisation in the last ten years, B.,

Rees, A. L. G. See Kefford, J. F. Rees, C. W., and Hale, M. W., morpholog and chemistry of blood of cattle in health and during anaplasmosis, A., III, 58.

Rees, H. G., adrenaline content and physiological activity of adrenal extracts, A., III, 148.

Rees, O. W., determination of ash in highcarbonate coals, B., 998.

Rees, R. L., rapid calculations concerning combustion of coal. IV. Water vapour in gases. VII. Percentage of carbon dioxide required in flue gases for maximum boiler efficiency. VIII., B., 8, 105, 312. Automatic gas sampler, B., 1286.

Rees, W. J., second report of the Steel Castings Research Committee. V. Work and programme of the Moulding Materials Sub-Committee, B., 45. See also Lyman, T. R.

Reetz, T. See Simon, Arthur. Reeve, L. See United Steel Cos. Reeves, E. D. See Standard Oil Development Co.

Reeves, G. See Brit. Celanese.

Reeves. J. R., and Martin, H. E., rôle of bacteria in autolysing tissue, A., III, 227.

Reeves, R. E., and Anderson, Rudolph J., lipins of tubercle bacilli. XLVII. Composition of the avian tubercle bacillus wax. XLVIII. Phthiocerol in the wax from strains of human tubercle bacillus. XLIX. Colorimetric determination of phthiocol, A., III, 318, 358.

Reeves, R. G., and Beasley, J. O., localisation of pentosans in resin glands of the cotton embryo, A., III, 330. See also Stewart, R. T.

Refetoff, R. See Millet, M.

Refining, Inc., apparatus for producing soap of low moisture content, (P.), B.,

Thurman, B. H., and Clayton, B., centrifugal separation of materials, (P.), B., 1147.

See also Burns, R. E., Clayton, B., and Thurman, B. H.

Reformatskaja, A. S. See Kaplan, S. I. Refrigeration Patents, Ltd. See Imperial Chem. Industries.

Reger, M. See Gen. Electric Co.

Reginster, A., diffusible and non-diffusible potassium of muscle, A., III, 475.

Regler, F., X-ray fine-structure vestigations on [steel] bridge-carrying structures, B., 1214.

Regler, H., and Hein, F., preparation of pure α-bromo-d-camphor-π-sulphonate, A., II, 158.

Regnaudin, A., proposed analytical method of classifying starches, B., 76. Regnant, P. See Champetier, G.

Régnier, J., local anæsthetics, (P.), B., 393. David, R., and Joriot, R., effect of p_H on the growth of rootlets of the white lupin; determination of toxic action on the plant cell, A., III, 409. Application of Macht's phytopharmacological technique to the study of changes in medicinal solutions, B., 1267. Effect of heat and ageing on toxicity of solutions of cocaine hydrochloride, B., 1267. Effect of initial reaction of solutions of cocaine hydrochloride on their stability, B., 1267.

and Lambin, S., comparative effect of various morphine salts, injected intravenously, on cocaine local anæsthesia, A., III, 350.

Lambin, S., and Szolloesi, E., determination of the toxicity of medicinal

substances, A., III, 352.

and Quevauviller, A., action of hydrochloride and phenylpropionate of morphine on excitability of the motor nerves in a medium deprived of electrolytes; comparison with action of the hydrochloride in Ringer's solution, A., III, 137. Variations in effects of novocaine and morphine citrates on the nerves in an electrolytefree medium according to differences in concentration, A., III, 309. Variation of mode of action of local anæsthetics on the motor nerve with chemical type; cocaine and its substitutes; percaine, A., III, 350. Influence of the anion on the action of salts of novocaine and morphine on motor nerves; different qualitative effects depending on the concentration, A., III, 425.

Regnier, M. T., fixation of sulphonal by endrocrine glands, A., III, 63. Rehaag, H. See Schenk, P. W.

Rehberg, R., influence of malt husk on mashing and on wort and beer, B.,

Rehbinder, P., effect of adsorption layers on properties of disperse systems, A., I, 358. Effect of adsorption layer on wetting phenomena in the flotation process, A., I, 358.

Rehm, K. See Sieverts, A. Rehorst, K., decomposition of double lactones of d-mannose sugar acids with alkali and with alkaline iodine. A., II.

Reich, A., detection of silicic and boric

acids, A., I, 530.

Reich, G. T., comparison of process economics in the alcohol industry, B., 831. Dehydration of esters, (P.), B., 213. Purification of yeast, (P.), B., 278. Recovery of non-sugars from saccharine materials, (P.), B., 382. Multiple-effect distillation of alcoholcontaining mediums, (P.), B., 1117. Production of fertiliser and charcoal from waste organic matter, (P.), B., 1255.

Reich, W. S., and Damansky, A. F., constitution of starch. I. Homogeneity of natural starch. II. Relationship between starch and the substances known as "amylopectin" and amylose, and action of water on

starch, A., II, 326.

and Trpinac, P., so-called "soluble starch," A., II, 487.

Reichard, F., layout and operation of a benzol oil-washing plant, B., 204.

Reichard, (Miss) S. K. See Finnemore, H.

Reichart, E. L., Neufchatel and cream cheese, B., 972.

Reichel, E., index of efficiency of methods of quantitative analysis, A., I, 528.

Reichel, L. [with Burkart, IV.], anthocyanins as biological hydrogen acceptors, A., III, 333.

and Eisenlohr, K. H., a-claterin, A., II,

and Reinmuth, W., conditions of action and specificity of Ricinus lipase, A., III, 32.

Reichenberg, E. H., and Reichenberg, S. W. [aromatic] o-hydroxycarboxylates and o-hydroxycarboxylic acids, (P.), B., 328. Reichenberg, S. W. See Reichenberg,

Reicheneder, F. See Hesse, G.

Reichert, B., mechanism of addition of hydrogen and bromine to ω-nitrostyrenes and a-nitrostilbenes, A., II, Hormones of the vegetable kingdom, A., III, 501.

and Hoffmann, IV., constituents of Verbena officinalis, L. II. Constitution of cornin, A., II, 384.

and Moldenhauer, F., action of primary amines on aβ-dibromopropiophenone, A., II, 502.

and Posemann, H., transformation of ay-amino-ketones into aδ-nitro-ketones, A., II, 249.

See also Böhme, H.

Reichert, F.L. See Chaikoff, I.L. Reichert, J.S. See Du Pont de Nemours & Co., E. I.

Reichert, W., [application and discharge of] benzo fast copper dyes, B., 660. Indanthrene [vat] dyes, B., 660.

Reichert, W. G., control tests for moulding sands, B., 929.

Reichhold, H. See under Reichhold Chemi-

Reichhold Chemicals. See Hovey, A. G. Reichinstein, D., displacement law of maximum velocity of bimolecular heterogeneous reactions, A., I, 416. Microchemical determination of the acidic character of organic dyes, B., 1316.

Reichmann, R., and Siemens & Halske A.-G., shaped bodies of non-plastic metallic oxides, (P.), B., 241. Compact bodies [sparking-plug insulators] consisting of pure magnesium oxide or beryllium oxide, (P.), B., 347.

Reichrudel, E., and Spivak, G., effect of excited gas on processes in the cathode region of the glow discharge, A., I, 208.

Reichstein, T., constituents of the adrenal gland. X. Corticosterone. XI. Constitution of the $C_{21}O_5$ group, A., II, 506. *l*-Ascorbic acid [vitamin-C], (P.), B., 291, 841. l-Ascorbic acid, (P.), B., 1268.

and Baud, J., fission of the coumarone nucleus, A., II, 512.

Laqueur, E., Uyldert, I. E., De Fremery, P., and Spanhoff, R. W., active crystalline substance, corticosterone, from adrenal cortex, A., III, 184.

See also De Fremery, P., Gätzi, K., Morsman, H., Neracher, O., Prince, R., Sawlewicz, J., Steiger, M., and Titoff,

Reichwein, H. See Ruggli, P.

Reid, A., chemical and physical considerations involved in cementing of oil wells, B., 242.

See also Evans, Percy.

Reid, C., formation of glycogen in the liver of anæsthetised cats: specific dynamic action, A., III, 130. Insulin and storage of livor-glycogen in anæsthetised cats, A., III, 151.

Reid, E., and Cheng, R. G., transference of ingested fluorine from parent to offspring, A., III, 473.

See also Cheng, R. G.

Reid, E. E. See D'Alelio, G. F., Du Pont de Nemours & Co., E. I., Ruhoff, J. R., and Wenzel, F. W., jun.

Reid, E. W., alcohols of industry, B., 522. Sec also Carbide & Carbon Chemicals Corp.

Reid, F. R. See Brown, B. E., and Scholl, W.

Reid, J. A., Schulz, W. A., and Phillips Petroleum Co., purification of hydrocarbon oils, (P.), B., 1302.

Reid, M.J. See Eastman Kodak Co. Reid, R. D., bacterial pigmentation. Historical considerations. II., A., III, 227.

Reid, W. H. E., crystalline structure of different ice creams, B., 1400.

Reid, W. J., jun. See Smith, C. E. Reif, G., determination of fructose with selenious acid, A., II, 136.

and Steinbeck, H. J., behaviour of aluminium towards fruit products, B.,

Reif, J. F., dust collector, (P.), B., 634. Reifenberg, A., irrigation water and cultivation of citrus, B., 824.

Reifer, I. See Rappaport, F. Reiff, F., and Müller, A., electrolytic dissociation of basic barium perchlorate, A., I, 29. Electrolytic dissociation of basic lead salts, A., I, 29.

Reiff, O. M., and Socony-Vacuum Oil Co., composition and petroleum products, (P.), B., 1165. [Hydrocarbon oil] compositions and potroleum products, (P.), B., 1306.

See also Rather, J. B.

Reifgerst, K. See Fingerling, G. Reihlen, H., action of nitric oxide on nickel

carbonyl, A., I, 196.

Reilly, J., Kelly, D. F., and Ryan, D. J., mixtures of constant boiling point for solvent-extraction purposes; extraction of waxes from peat, B., 1082.

Reilly, J. H. See Dow Chem. Co. Reilly, P. C. See Derby, I. H.

Reiman, W., report of 1935-36 Committee on testing biscuit and cracker flours, B.,

Reimann, A. L., photo-conductivity and phosphorescence of zinc blende, A., I,

Reimer, F. See Hückel, W. Reimer, P. J., paper, (P.), B., 129.

Reimers, F., stability of sodium aurichloride solutions, A., I, 92. Tests in the Dispensatorium Danicum, 1934, B., 496. Reimers, L., detection of sulphur dioxide

in flour, B., 385.

Rein, L. M. See Smorodincev, I. A. Reinardy, E. W. See Seevers, M. H.

Reinartz, F., pharmacology of camphor. II. Action of camphor and epicamphor on smooth muscle of leeches and on morphine-affected respiration of rabbits, A., ĪII, 134.

Reinboth, H. See Neumann, H. Reindel, F., Niederländer, K., and Pfnndt, R., production of sterol by yeast, A., III, 314.

Reindel, W., and Schuler, W., xanthine dehydrogenase; dehydrogenation of uric acid to xanthino by surviving tissue, A., III, 304. Synthesis of urio acid in the organism of the bird. IV. Xanthino synthesis, A., III, 383.

Sce also Schuler, W. Reinders, W., and De Vries, R. W. P., silver nucleus theory of the latent image;

critical nuclear size, A., I, 626. Reindollar, W. F., effect of terminal procedures on liver-glycogen, A., III,

See also Goldstein, S. W.

Reindorp, J. H. See Tru Colour Film. Reinecke, H., treatment of hydrocarbon fuels, (P.), B., 16.

Reiner, M. See Doubilet, H., and Pollack,

Reingold, L., influence of dissociation on flame temperatures, A., I, 141. Chemical equilibria in the gaseous phase; application to determination of the temperatures of flames by means of directreading diagrams, B., 9.

Reinhard, G. C. See Amthor, F. Reinhardt, J. C. See Jones, T. D.

Reinhardt, O., thermometers, (P.), B., 998. Reinhardt, W. L., and Willard Storage Battery Co., storage batteries, (P.), B.,

Reinhart, H. See Zetzsche, F. Reinhold, J., nutritional and physiological

action of nettolin in vegetable culture, B., 1101. Merten, O., and Gross, M., influence of manuring on yield and quality of

pickling cucumbers, B., 1103. Reinkober, O., solidity and elasticity of thin quartz threads, A., I, 173.

Reinmuth, W. See Reichel, L.

Beinsberg, C_{\bullet} , theory of widening of spectral lines of a series by a foreign gas, A., I, 208,

Reinstein, V. See Zinkov, Z. E.

Reis, A., measurement of angular region of reflexion of X-rays in polycrystalline substances by a new statistical method, A., I, 534.

Reis, J., specific phosphatase of nervous tissue, A., III, 314.
Reischauer, W., return of waters from diffu-

sion batteries and pulp presses to working [in beet-sugar factories], B., 827.

Reisemann, E., activated charcoal in the mineral oil industry, B., 314.

Reiser, R., lipin analysis of human thoracic duct lymph, A., III, 458.

Reising, J. A., electrostatic responses of pigments in relation to flooding, dispersion, and flocculation, B., 699.

Reisinger, C. See Jahn, R.

Reiss, C. See Reiss, P. Reiss, F. O., and Mantle Lamp Co. of America, parchment paper, (P.), B., 1194.

Reiss, K. H., dissociation in electric field, and insulating liquids, A., I, 64. Mechanism of current conduction in liquids of low dielectric constant, A., I, 169, 498. Thermionic emission into dielectric liquids, A., I, 337.

Reiss, M., Schwartz, L., and Fleischmann, F., dehydrogenation process in animal tissues after thyroxine treatment, A., III,

Reiss, P., Nordmann, J., and Reiss, C., physico-chemical conditions for rendering crystallin opaque, A., III, 295.

See also Bezsonoff, N.
Reistle. C. E., jun., Cannon, G. E., and
Buchan, R. C., standard practices for field testing of drilling fluids, B., 1007.

Reiter, M. A. See Nicholson, D. G. Reith, J. F., goitre and water supplies in Holland, A., III, 256. Distribution of veronal over the organs in a fatal case of

veronal poisoning, A., III, 266. Reitler, E., beryllium: occurrence and extraction, B., 686.

Reitz, A. W., Raman effect. LXIII. Five-membered ring. II. Experi-Five-membered ring. II. ments with models, A., I, 283.

and Skrabal, R., Raman effect. LXXII. Nitrogen compounds. IV. Nitriles, A., I, 497.

See also Conrad-Billroth, H., and Kahovec, L.

Reitz, H. See Fries, K.

Reitz, M., manufacture [and testing] of porcelain insulators, B., 1341.

Reitz, O., acid catalysis in light and heavy water, A., I, 88. Acid and base catalysis in light and heavy water; bromination of acetone catalysed by hydrogen ions, A., I, 469.

See also Bonhoeffer, K. F.

Reman, G. H. See Vermeulen, D. Rembert, E. W., and Tide Water Oil Co., treatment of hydrocarbon oils, (P.), B.,

Remennikova, $E.\ L.$ See Sadikov, $V.\ S.$ Remesnikova, $E.\ G.$ See Epik, $P.\ A.$

Remesov, I., colloidal state of cholesterol, cholesteryl esters and lecithin. XIV. Formation of cholesterol sols, A., I, 133. Synthesis of female ovarian hormone "folliculosterone," A., II, 251. Dependence of biological action of sexual hormones on their structure, A., III, 101.

Remesov, I., and Karlina, M. I., cryogenic method of preparing hydrosols of sterols and phospholipins, A., III, 339.

and Sepalova, O., colloidal state of cholesterol, cholesteryl esters, and lecithin. XII. Reduction-oxidation properties of cholesterol and its derivatives in the colloidal condition, A., I, 28.

and Sosi, J., colloidal state of cholesterol, cholesteryl esters, and lecithin. XIII. Quasi-redox potential of cholesterol

sols, A., I, 28.

Remick, W. L., and Hydrotator Co., apparatus for separating mixed materials, (P.), B., 98. Separation of mixed materials, (P.), B., 993.

Remington, J. S., zinc oxide: properties

and uses in paint manufacture, B., 466. Remington, R. E., improved growth of rats

on iodine-deficient diets, A., III, 473. and Levine, H., relation of diet to goitre. III. Goitrogenic diet, A., III, 256. See also Levine, H.

Remington, V. H., art of decorating glass. I.—III., B., 780, 1048.

Remington Arms Co., Inc. See Burns, J.E.Remiz, E. K., and Frost, A. V., equilibrium constants of reaction of hydration of propylene to isopropyl alcohol, A., I, 241.

Remlinger, P., and Bailly, J., blood-urea in experimental rabies in the dog and rabbit, A., III, 257. Blood-sugar of animals affected with rabies, A., III, 343.

Rempel, S. Sco Karpatschov, S.

Remy, E., hygienic efficiency of chlorination of water for swimming baths, B., 92. See also Uhlenhuth, P.

Remy, J. Sco Rasselsteiner Eisenwerks-Ges. A.-G.

Rémy, P. See Magne, H. Remy, T. P. Sco Texas, Co.

Renaud, P., nitrogen compounds of

phosphorus, A., I, 474. and Costeanu, G., diffusion of gases emerging from tubes, and chemical consequences of turbulence thereby set up, A., I, 359. Anomalies in the action of water vapour or ammonia on sodium or hæmatoxylin, A., I, 371.

Renault, L., gas case-hardening furnaces, (P.), B., 1224. Furnaces for heattreatment [of metals] in a gaseous atmosphere, (P.), B., 1359.

Renault, P., tests on ceramic products, B., 1340. Attempts to differentiate between faience and porcelain with a Chevenard

differential dilatometer, B., 1340. Rencker, E., and Vallet, P., thermal decomposition of cuprammonium sul-

phates, A., I, 371.

Rendle, B. J., growth and structure of wood, B., 1056.

Renescu, N., and Potop, I., glutathione in the blood of dogs during chronic poisoning with cyanides, A., III, 310.

Renfrew, A., and Caress, A., styrene and acrylic resins, B., 944.

Renfrew, A. G. See Butler, C. L., and Cretcher, L. H.

Renfrew, P. B., and Bowser & Co., S. F., purification of insulating and lubricating oils, (P.), B., 1307. Dohydration of oils. (P.), B., 1307.

Marsh, L. E., and Bowser & Co., S. F., reclamation of absorption oil, (P.), B.,

Renfrow, W. B., jun. See Hauser, C. R. Rengachari, S. Seo Sitharaman, M. V., and Srikantan, B.S.

Rengade, F. See Maillard, A.

Rennenkampff, E. von. See Fricke, R. Renner, F., theory of the atomic photo-

electric effect, A., I, 273. Renner, F. G., conditions influencing [soil] erosion on the Boiso river watershed, B.,

Rennerfelt, E., fungal damage in wood pulp, B., 125. Fungal infection of groundwood pulp, B., 1035.

Rennerfelt, I., refining of carbon-containing alloys and metals, (P.), B., 454. Rennhak, S. See Windaus, A.

Rennie, J. L., ammonia coefficient of the urino in treated cases of diabetes mellitus; effect of diet, A., III, 300.

Renninger, M., strengthening of weak and spurious appearance of forbidden X-ray reflexions by "indirect" excitation, A., I, 117. "Detour-excitation, a hitherto unnoticed retroaction phenomenon in grating interference, A., I, 446.

Rennkamp, F., and Schuler, B., technique of blood-diastase determination by Ottonstein's method, A., III, 112.

Rennotte, J., separation of liquid mixtures by distillation, (P.), B., 857.

Reno, R. E., jun., and Wheeling Steel Corp., electric [transformer] sheet [steel], (P.), B., 1225.

Renshaw, A. See Dyson, G. M. Renshaw, E. S. See Ford Motor Co. Renshaw, R. R., phenoxypyridine, A., II,

and Conn, R. C., onium compounds. XVI. Quaternary derivation of pyridyl

others, A., II, 165. and Searle, D. E., onium compounds. XVII. Thioethers of formocholine and

their sulphones, A., II, 488. Tisza, E. T., Dnesel, B. F., and Pyridium Corp., medicinal azo-compounds, (P.), B., 288.

See also Hunt, R.

Renton, H., pregnancy test: presence of histidine in urine of pregnant women, A., III, 15.

Rentschler, H. C., and Henry, D. E., photo-electric emission, A., I, 169. Effect of oxygen on photo-electric thresholds of metals, A., I, 273.

Rentschler, M. J., and Hamilton Labs., phenyl mercuriacetate, (P.), B., 1136. Renwanz, G., decontamination of buildings

impregnated with mustard gas, B., 190. Renz, J., mimosin, A., III, 50.

Repa, A. G., possibility of producing common salt from sea-water by freezing, B., 1334.

Republic Steel Corporation. See Farnsworth, W. M., Kelvie, J. D., Leventry, R. L., and Walker, G. G.

Requinyi, G., tartario acid content and alkalinity of ash of Hungarian and American wines, B., 967.

Reřábek, J. See Hykešová, D. E. Resch, C. E. See Angell, S., and Norris,

F. W.

Reschetnikov, M. A., colloid-chomical behaviour of mixed building coments and determination of the optimal relations of their components, B., 553.

Reschke, J. Sco Scheunert, A. Research Corporation, halogen derivatives

of [y-]acetopropanol [methyl y-hydroxypropyl ketone], (P.), B., 1312. Synthesis of a thiazole compound and its salts, (P.), B., 1316.

See also Gilbert, C. G., and Hedberg, C. W. J.

Research Corporation of New York, electrical precipitation of suspended particles from gases, (P.), B., 363.

Resinous Products & Chemical Co., Inc. See Bruson, H. A.

Resinox Corporation. See Gabriel, C. L., Irey, K. M., and Sturken, O.Resnik, H., jun. See Mason, M. F.

Respats, Inc. Sco Pollock, R. T. Respess, R. B. See Hanley, A. J.

Respro, Inc. See Hanley, A.J.Resta, L. S. Sco De Robertis, E.

Resühr, B., hydration and permeability of unfertilised Fucus eggs (F. vesiculosus, L.), A., III, 23. Mathematical treatment of absorption by living protoplasts, A., III, 234.

Resuggan, J. See Lin, K. H. Retailliau, H. H. See Kyrides, L. P.

Retezeanu. See Urechia, C.I.Reti, L., biochemistry of vitamin-A; state of combination in liver oils, A., ПІ, 187.

Řetovský, R., hydrocatalase of the mineral

springs in Korytnice, A., I, 584.
Rettger, L. F. See Edwards, O. F., and
Gillespie, R. W. H.

Reumann, F., breakages in drying roofing tiles, B., 549.

Reumuth, H., Kling, W., and Schwerdtner, H., fibre-surface studies. III. R-O-X procedure for microscopical surface testing of rayon and staple fibres, B.,

Reusch, H. J. See Wartenberg, H. von. Reuss, A., sources of error in detection of ammonia in drinking water by means of Nessler's reagent, B., 504. Detection of sewage in drinking water by the Gricss reaction, B., 505.

Reuss, E. See Lustig, B. Reuszer, H. W., total nitrogen changes in certain Colorado soils as determined by the Kjeldahl method, B., 1249. Reuter, F. See Clutterbuck, P. W.

Reuter, L., determination of auxin-B, A., III, 286.

Renter, R. See Geniesse, J. C. Reuther, H. See Simon, Arthur.

Reve, J. M., and Conchon, M.J., apparatus for wet treatment of gases, (P.), B., 308. Revere Copper & Brass, Inc. See Bunn, E. S., and Wilkins, R. A.

Revie, G. N. See Boake, A.

Révol, L., micro-determination of sulphur in normal blood-serum, A., III, 452. and Paccard, R., total sulphur in human and cow's milk, A., III, 457.

and Trouillas, L., various forms of sulphur in therapeutic sera; determination of inorganic sulphur, A., III, 452 See also Leulier, A.

Revukas, A. See Whitmore, W. F.

Revut, I. B., viscosimetric investigation of the structure of ferric hydroxide sols. IV. Influence of alcohols, A., I, 79. Structure formation in ferric phosphate

sols, A., I, 132.

Rewald, B., phosphatides in organs containing chlorophyll, A., III, 82. Fat and phosphatide content of wheat germ, B., 178. Determination of oils and phosphatides in organic raw material, B., 464. Milk phosphatides, B., 488. Phosphatides, B., 976. Phosphatide compositions, (P.), B., 617. Rapeseed phosphatides, B., 1403.

and Amer. Lecithin Co., lecithin nutrient material, (P.), B., 978.

Rex, C. R., cement improver, (P.), B., 787.

Rex-Hide, Inc. Sec Kempel, A. B. Rexer, E., long-wave extensions in ultraviolet absorption of alkali halide crystals, A., I, 391. Heat treatment and diffusion in salt crystals, A., I, 403.

Rey, M., theory of flotation of minerals, B., 685.

and Zeicher, M., microchemical analysis of very small grains, A., I, 426.

Reychler, A., [residual image after] removal of photographic emulsions, B.,

Reyerson, L. H., and Clark, R. E., adsorption of complex [metal-]ammine ions

by silica gel, A., I, 75. and Gillespie, B., equilibria of reactions between acetylene and heavy water at 0° and 100° and heats of reaction, A., I, 362.

and Wishart, A. W., sorption of chlorine by silica gel, A., I, 611.

Reyes, G., flotation of Punitaqui ores, B.,

Reynhart, A. F. A. See Shell Development Co.

Reynolds, A. H., and Dearborn Chem. Co., tannin briquette containing a retarding agent [for boiler water], (P.), B., 1145.

Reynolds, B. M., Heyden Chem. Corp., and Amer. Cyanamid Co., effecting a constant temperature of a catalytic reaction, (P.), B., 1144.

Reynolds, C. E., constant-volume method of tinting-strength determination, B., 157.

Reynolds, D. A. See Fieldner, A. C. Reynolds, D. H. See Clark, G. L.

Reynolds, D. L. [with Gibbs, A.], petrogenesis: Kiloran Bay, Colonsay. I. Transfusion of quartzite, A., I, 52.

Reynolds, E. B., Johnson, P. R., and Langley, B. C., effect of time and rate of application of sodium nitrate on yield of cotton, B., 72. Reynolds, F. L. Sco Dow Chem. Co.

Reynolds, H. See Werkman, C. H. Reynolds, H. H. See Du Pont de Nemours

& Co., E. I. Reynolds, J. H. Sce Blackmond, W. C. Reynolds, M. C. See Harris, B. R.

Reynolds, N. B. See Gen. Electric Co. Reynolds, P. W., and Hume-Rothery, W., constitution of silver-rich antimonysilver alloys, A., I, 73.

See also Chapman, D. L., and Hume-Rothory, W.

Reynolds, R. J. W. See Imperial Chem. Industries.

Reynolds, S. H. See Sibly, T. F. Reynolds, S. R. M., and Allen, W. M., effect of progestin on the growth response of the uterus to chronic distention, A., III, 491. Reynolds, W. H. See Hutchinson, R.

Rezabek, G., effect of different tan liquors on progress of tannage and properties of finished leather, B., 162. Effect of different methods of liming [of raw hides] on quality of finished [vegetable-

tanned sole] leather, B., 374.

Režek, A. See Prelog, V., and Weber, K.

Reznek, S. See Batscha, J.

Reznikoff, P., and Goebel, W. F., ferrous gluconate and its use in treatment of hypochromic anæmia in rats, A., III,

Reznitschenko, M. S., content of free amino and carboxyl groups in certain proteins, A., III, 340. See also Kozmina, N. P.

Rezon, V. V. See Kabatschnik, M. I. Rhein, M., and Stoeber, R., preservation of urine containing phenylpyruvio acid, A., III, 10.

Rheinboldt, H., Luyken, A., and Schmittmann, H., molecular compounds of dioxan. IV. Dioxanates of halides of alkali metals and of ammonium. V. Dioxanates of the halides of bivalent metals, A., II, 174, 318. and Tetsch, C., thioglycerols, A., II,

Rheineck, A. E., po-yok oil, B., 696. Drying of oils, B., 697. Rheinfels, accident prevention in the chemical industry, B., 396.

Rheinmetall-Borsig Akt.-Ges. Werk Borsig Berlin-Tegel, and Geissen, C., vertical distilling retorts, (P.), B., 643. Vertical coking retorts, (P.), B., 643. Vertical retort furnaces, (P.), B., 643.

Rhodes, A., movement of fluorescein in the plant, A., III, 408.

Rhodes, A. V. See Standard Oil Develop-

ment Co. Rhodes, E., and Piddlesden, J. H., concentration of [rubber] latex, (P.), B., 1246.

and Sekar, K. C., preservation of [rubber] latex by acids, B., 948.

Rhodes, E. O., and Volkmann, E. W., use of the A.S.T.M. penetration equipment for estimating viscosities of materials of high consistency, P., 988.

Rhodes, F. H., and Slachman, P. G., plate efficiency and entrainment in distillation, B., 196.

and Sun, H. H., lubricating properties of aluminium-base greases, B., 1007. and Wannamaker, T. E., lubricating

properties of lime-base greases, B., 871.

and Wynn, C. S., effect of salts on detergent action of soap, B., 256.

Rhodes, G. H., treatment of textile fabrics [to increase their weather-resistance], (P.), B., 234.

Rhodes, J. R. S., factory painting, B., 467. Rhodes, L. J., bagasse dust as filter-aid for vacuum filters, B., 379.

Rhodin, B. E. F., Chitty, A. H., and Munroe, D., sulphur dioxide, (P.), B.,

Rhys, J. A. See Roberts, K. C.

Rial, M. See Guzmán, F.

Riasanov, I. P., detection of cobalt with furfuraldehyde in presence of thiocyanates, A., I, 98. Ribak, P. J. See Guli, M. F.

Ribas, I., and Tapia, E., iodometric determination of magnesium, A., I, 199.

Ribaud, thermal conductivity of porous and powdered materials. B., 851.

Ribbans, S. H. See Laundry Automatic Appliances.

Ribère. See Thlodet. Ribéreau-Gayon, J., filtration of wines, B., 607, 1116.

and Peynaud, E., chemical and biological esterification of organic acids of wine, B., 719.

See also Espil, L. Ribiero, D. da F., Bixa orellana and carotene, A., III, 245.

Ribinski, F. N., and Vinogradov, S. V., macrostructure of welded joints, B., 1219.

Riblett, E. W., and Rubin, L. C., thermal decomposition of azomethane, A., I, Ricamo, R. Sec Ranzi, L.

Ricard, R., new terms in second spark spectrum of Hg III, A., I, 272.

Ricci, J. E., ternary systems KClO₃-KBr-H₂O, KClO₃-KI-H₂O, and KIO₃-KI-H₂O at 25°, A., I, 363. Evidence for molecular shift in the solid state, A., I, 556. Compound formation in the binary systems $Ba(NO_3)_2$ - KNO_3 ${
m Ba(NO_3)_2}$ and NaNO₃, A., I, 565. Budish, J., and Borodnlia, N., ternary

systems NaNO₃-NaBr-H₂O and NaNO₃-NaI-H₂O at 25°, A., I, 363. and Yanick, N. S., ternary systems KClO₃-K₂SO₄-H₂O and NaClO₃-Na₂SO₄-H₂O, A., I, 243. Rice, A. C., and Yerkes, L. A., analysis of

molybdenum, B., 1065.

Rice, C. W., boiler-water conditioning, (P.), B., 1144.

Rice, J. A., and Bubblestone Co., cellular cement, (P.), B., 1057.

Rice, J. C., and Isenberger, R. M., pharmacodynamic reactions of intracisternal sodium ethylisoamylbarbiturate (sodium amytal), pyridine-3-carboxylic acid diethylamide (coramine), pentamethylenetetrazole (metrazol), and picrotoxin during morphine-sodium ethylisoamylbarbiturate anæsthesia, A., III, 136.

Rice, J. H., briquetting machines, (P.), B.,

Rice, O. K., internal volume and entropy of vaporisation of liquids, A., I, 353. Transitions in condensed systems, A.,

See also Ogg, R. A., jun.

Rice, O. R., and Freyn Eng. Co., blastfurnace construction, (P.), B., 689. See also Ebner, A.J.

Rice, R. V., Jenkins, C. L., and Harden, W. C., derivatives of $\beta\beta\beta$ -trialkylethanols, A., II, 480.

Rice-Stix Dry Goods Co. See Bebie, J. Rich, A. D. See Vollertsen, J. J.

Rich, P. C., and Vapor Treating Processes, treatment of metallic salt solutions [from petroleum refining], (P.), B., 437.

Richard, A. See Drevon, B.
Richard, A. H., gauging and testing of crude oils, B., 203.

Richard, G. See Girard, A.

Richard, H., plot experiments at Lieusaint, B., 819.

Richards, A. N., Westfall, B. B., and Bott. P. A., inulin and creatinine clearances in dogs; late effects of uranium poisoning, A., III, 61.

See also Hendrix, J. P., and Walker,

Richards, C. E., magnetic tester for thick-

ness of plating, galvanising, etc., on iron articles, B., 1348.

Richards, E. T., graphite crucibles for [metal] melting, B., 1153. Influence of itenium particles, B., 1163. titanium on properties of chromiumrich steels at high temperature, B., 1351.

Richards, G. O. See Hinkel, L. E.

Richards, J. See Gen. Electric Co.

Richards, L. A., capillary conductivity data for three soils, B., 705.

and Gardner, W., tensiometers for measuring the capillary tension of soilwater, B., 709.

See also Ivie, J. O. Richards, O. W., analysis of growth: yeast, A., III, 143. Richards, W. F. See Ungnade, O.

Richards, W. T., Kirkpatrick, E. C., and Hutz, C. E., crystallisation of undercooled liquids, A., I, 18.

Richards Chemical Works, Inc. See Kaplan, P.

Richardson, A. P. See Hanzlik, P. J., and Lehman, A. J. Richardson, A. W., and Richardson, G.,

heat insulation, (P.), B., 510.

Richardson, C. H., nutrition and metabolism of insects, A., III, 466. Insecticides and insect toxicology, B., 1390.

Deonier, C. C., and Simanton, W. A., toxicity of certain insecticides to the chinch bug, B., 826.

See also Elmore, J. C. Richardson, D. H., influence of substituents on coupling of phenols with diazonium salts, A., II, 412.

Richardson, E. G., sedimentation analysis with photo-electric cell, A., I, 614. Meter for clays and mineral dusts, and its applications, B., 1285. Turbulence

diffusion, B., 1286.
Richardson, F. D. See Goodeve, C. F. Richardson, G. See Richardson, A. W. Richardson, G. A., transition point of milk fat, B., 1120.

and Hankinson, C. L., amylase in cow's milk, A., III, 394.

Richardson, G. M., nutrition of Staphylococcus aureus; necessity for uracil in anaërobic growth, A., III, 36.

See also Gladstone, G. P., and Kögl, F. Richardson, H. L. See Norman, A. G. Richardson, H. M. See Clews, F. H.

Richardson, H. O. W., relations in β -ray transformations and the neutrino theory, A., I, 210.

and Leigh-Smith, A., nuclear β-rays of radium-D, A., I, 438.

See also Ellis, C. D.Richardson, J. E., Davis, R., and Mayfield, H. L., vitamin C content of potatoes prepared for table use by various methods of cooking, B., 835.

Davis, R., and Sullivan, P., vitamin-Ccontent of oranges and lemons, A., III, 233.

Richardson, J. K., control of late blight of celery, B., 1254.

Richardson, J. R., and Kurie, F. N. D., radiations emitted from artificially produced radioactive substances. II. γ -Rays from several elements, A., I, 59. Measurement of γ-ray energies with a cloud chamber, A., I, 489.

Richardson, J. R. E., rôle of heavy metals in animal metabolism, A., III, 175.

Richardson, K. N., uses of Ti-tree oil, B., 697.

Richardson, L. R., and Hogan, A. G., skin lesions of the rat associated with vitamin-B complex, A., III, 43.

See also Hogan, A.G., and Robbins, W.J. Richardson, L.T., and Cutler-Hammer, Inc., pressure-mouldable [heat-]insulating compositions, (P.), B., 630.

Richardson, N. A., wood preservatives, B., 787. Action of timber fireproofing compounds, B., 915.

Richardson, O. W., band systems ending on the $1so2s\sigma^1\Sigma_g$ (1X_g) state of H_2 . I., A., I, 435.

Richardson, R. W., continuous filter, (P.),

Richardson, T., Robinson, R., and Seijo, E., synthetical experiments in the chelidonine-sanguinarine group of the alkaloids. I., A., II, 356.

Richardson, W. D., de-airing [of clay] in the auger machine without vacuum pump, <u>B</u>., 345.

Richardt, F. See Vater, G. Richart, F. E., and Keranen, J. E., shrinkage of Haydite and sand-gravel concrete, B., 675. See also Jones, P. G.

Richey, J. E., Scotland: the tertiary vol-

canic districts, A., I, 206. Richmond, J. C. See Amberg, C. R.

Richmond, W. E., livingstonite, A., I, 102. Babingtonite, A., I, 430. Crystallography of livingstonite, A., I, 434. Paragenesis of the minerals from Blueberry Mountain, Woburn, Massachusetts, A., I, 483.

Richou, R. See Ramon, G. Richter, C. P., and Eckert, J. F., increased calcium appetite of parathyroidectom-

ised rats, A., III, 403. Holt, L. E., jun., and Barelare, B., jun., vitamin-B, craving in rats, A., III, 494.

Richter, D., anthraquinone colouring matters: ruberythric acid, A., II, 7. Vital staining of bones with madder, A., III, 211. Adrenaline and amine oxidase, A., III, 480.

and Blaschko, H., oxidation product of adrenaline, A., II, 261.

See also Blaschko, H., Green, D. E., and Hill, R.

Richter, Gerd. See Bredereck, H.

Richter, Gustav, magnetic secondary effects in carbonyl iron, B., 1059. Influence of surface conditions on the endurance limit of aluminium wires, B., 1222.

Richter, G. A., processing of cellulose pulp for esterification purposes, (P.), B., 127. and Brown Co., parchment papers, (P.), B., 130. Surface-finished paper, (P.), B., 230. Paper, (P.), B., 230, 536. Fibre-liberating process, (P.), B., 334. Chemical purification and modification of cellulose fibre, (P.), B., 430. Cyclic treatment of alkaline pulps, (P.), B., 536. Correlation of chemical recovery in pulp mills operating with different kinds of liquors, (P.), B., 1038.

Schur, M. O., and Brown Co., absorbent

cloth-like paper, (P.), B., 1324. Impregnated fibre articles, (P.), B., 1331.

Vannah, H. P., McMurtrie, D. H., and Brown Co., solutions of hydroxycellulose ethers, (P.), B., 1323.

Vannah, H. P., Rasch, R. A., and Brown Co., clarification of cellulose ether solutions, (P.), B., 1191. Richter, G. H. See Taggart, M. S.

Richter, H. (Berlin), testing solid fuels, B., 861. Choice and care of transformer and switch oils, B., 1008.

Richter, H. (Cologne), double scattering of rapid electrons, A., I, 209.

Richter, H. (Königsberg). See Merz, K. W. Richter, Hans. See Radio Corp. of America. Richter, Hans (Bremen), avoidable steam losses through leaking steam traps, B., 627.

Richter, H. E. See Kaatz, L.

Richter, J., and Gehring, K., hormonal diagnosis of pregnancy in the mare, A., III, 59.

Richter, J. C. F. C., mixing tank for fibrous material suspended in liquid, (P.), B., 741.

Richter, O., microchemical detection of cystoliths by Molisch's method; detecting reduction phenomena brought about in cystoliths by ultra-violet light, A., 11I, 288.

Richter, W. See Böhm, F.

Richter, W. F., and Chem. Holding Corp., recovery of carbon disulphide from viscose products, (P.), B., 429. ichtmann, Z., "internal

Richtmann, Z., "internal thermodynamics," A., I, 22.
Rlchtmyer, F. K., double ionisation of atoms, A., I. 346.

and Parratt, \hat{L} . G., wave-lengths of KaX-ray satellite lines for olements S (16) to Ge (32), A., I, 540. and Ramberg, E. G., satellite structure of

 $L\alpha$ and $L\beta_2$ of Au(79), A., I, 436.

See also Parratt, L. G., and Ramberg, E, G

Richtmyer, N. K., and Hudson, C. S. asymmetric oxidation of sugars by optically active alkaline copper solutions. A., II, 51. Rearrangement of sugar acetates by aluminium chloride; celtrobiose and its derivatives, A., II, 52.

Richtzenhain, H. See Pummerer, R.

Rickert, H. F. See Alder, K. Ricketts, H. T. See Jacobs, H. R.

Rickles, N. H. See Standard Oil Development Co.

Ridalevskaja, M. D. See Tischtschenko,

Riddell, G. L., study of printing inks and their relationship to printing processes, B., 945.

Riddell, S. H. See Whitnah, C. H.

Riddell, W. A., phenolated pilchard oil, B., 807. Nutritive value of marine products.
XI. Proximate analysis of canned
British Columbia coho (blueback) salmon. XII. Mineral constituents of food fishes of British Columbia. XIII. Mineral constituents of the flesh, skin, bone, and free liquor in canned British Columbia coho salmon, B., 973.

Riddell, W. H., Caulfield, W. J., and Whitnah, C. H., normal variations in curd

tension of milk, B., 1120.

See also Caulfield, W.J., Cave, H. W., and Leuschen, M.E

Riddet, W., Levy, E. B., Woodcock, J. W. Marryat, E. R., Hodgson, J. N., and Sears, P. D., feed flavour in cream and butter, B., 1123.

and Neill, J. C., butter boxes and mould growth, B., 141.

Riddihough, M., small laboratory crucibles for laboratory work, B., 550.

Riddle, A. R., electrodes for $p_{\rm H}$ measurement, A., I, 266.

Riddle, O., and Dotti, L. B., blood-calcium in relation to anterior pituitary and sex hormones, A., III, 101. See also Bates, R. W.

Rideal, E. K., factors in membrane

permeability, A., I, 512. and Mitchell, J. S., photochemical reactions in mono-layers. I. Photochemical properties of the keto-iminolinking, A., I, 370.

See also Bosworth, R. C. L., Gee, G., MacGillavry, D., Mitchell, J. S., Schulman, J. H., and Van Cleave, A. B.

Ridenour, G. M., and Henderson, C. N., comparison of sewage purification by compressed air and mechanicallyaërated activated sludge, B., 191, 734. Henderson, C. N., and Schulhoff, H. B.,

operation experiences with chlorination of activated sludge, B., 734.

Ridenour, L. N., and Henderson, W. J., artificial radioactivity produced by a-particles, A., I, 439, 490. See also Henderson, W. J.

Rider, T. H., esters of phenylcarbamio acid [anæsthetics], (P.), B., 288.

and Cook, E. S., effect of purification of piperidine on activity of derived local anasthetics, A., II, 467.
and Merrill Co., W. S., purification of ricinoleic acid, (P.), B., 1369.

Shelton, R., and Merrell Co., W. S., benzoyl persulphide, (P.), B., 120.
Sperti, G. S., Good, G. P., and Cassidy,

H. G., selectively irradiated ergosterol, A., III, 497.

See also Bambach, K., and Cook, E. S. Ridgion, J. M. See Evans, E. C. Ridgway, C. M., and Pure Oil Co., desul-

phurisation of petroleum oils, (P.), B., 1303.

Wagner, C. R., and Swanson, H. R., products of polymerisation [of unsaturated hydrocarbon gases], B., 641.

Ridgway, R. R., Bailey, B. L., and Norton Co., boron carbide articles, (P.), B., 251. Wire-drawing die, (P.), B., 251. Bearing, (P.), B., 251. Ridgway, W., Hannay, R. J., and Berry,

D. S., drying of crêpe and other fabrics of paper, hair, wool, or other material, (P.), B., 334.

Řidký, A. See Babička, J.

Ridler, E. S. See Grasselli Chem. Co. Ridley, A. E., pickling, cleansing, swilling,

and washing metal plates, etc., (P.), B.,

Ridley, C. N., corrosion of hot-water heating systems, B., 95. Ridley, F. F., and Colliery Eng., pneu-

matic separation of materials of different sp. gr. and sizes, (P.), B., 303.

Ridley, P. See Brindley, G. W. Ridley, W., Wilson, P. H., and Cochranes' (Middlesboro') Foundry, manufacture of unchilled metallic castings by the centrifugal casting process, (P.), B., 455.

Ridout, J. H. See Best, C. H.

Ridsdale, N. D., moulding sand tests in Great Britain, B., 142.

Riebeck, W., preparation of fine and powdered material in a pulsating air current, B., 2.

Rieche, A., oxidation of organic compounds with atmospheric oxygen, A., II, 315.

Riedel, L., experimental determination of free path of electrons in lead and cadmium, A., I, 292. Determination of number of free electrons in metals from their mean free paths, A., I, 440.

See also Eucken, A.

Riedel-E. De Haen Akt.-Ges., J. D. See Boedecker, F.

Rieder, F. See Koch, F.

Riederer, K., system aluminium-magnesium-zine, A., I, 74.

Riedl, H., hydrogen peroxide as bleaching agent in textile industry, B., 30.

Riegel, C., Ravdin, I. S., Johnston, C. G., and Morrison, P. J., gall-bladder bile in pregnancy at term and in calculous and non-calculous cholecystitis; white bile, A., III, 12.

Ravdin, I. S., and Rose, H. J., combined cholesterol in human bile, A., III, 88. Effect of bile with and without cholesteryl esters on esterification of cholesterol in plasma, A., III, 412.

Riegert, A. See Schmid, F., and Schwartz, Alfred. Riegler, R. See Nat. Aniline & Chem. Co.

Riehl, N., formation and mode of action of light-sensitive zinc sulphide and other luminophores, A., I, 444.

and Ortmann, H., effect of pressure on phosphors, A., I, 395.

See also Graue, G., and Wolf, P. M. Riehm, E., plant-parasiticide industry and the four-year plan, B., 482.

Richm, P., what is meant by the term "tar," B., 1156.
Ricke, C. A. See More, K. R.
Ricke, F., transfer of rotational energy in

molecular collisions. II. Exchange of energy in collisions between unexcited HgH and Na molecules, A., I, 596.

Ricke, R., testing suitability of kaolins for porcelain manufacture, B., 1050. and Mauve, L., application of German kaolins in porcelain manufacture. I. and II., B., 1050.

and Mields, H., acid-resistance of ceramic enamels containing lead as dependent on their composition, B., 547.

and Pasch, W., action of zinc oxide on kaolin at different temperatures, B.,

Rieman, W. See Schneider, Frank. Riemenschneider, E. W. See Crowley, H. G.

Riemenschneider, R. W. Sec King, F. B. Rienäcker, G., fine structural changes in metallic solid solutions and their influence on properties of these alloys as catalysts, A., I, 469. Riesenfeld, E. H., occurrence of heavy

water in nature, A., I, 381.

and Chang. T. L., homogeneous reactions with an undulating velocity curve, A.,

Riesmeyer, A. H. See Derr, R. B. Riess, C. See Küntzel, A.

Riesser, O., physiology of muscle, A., III, 464.

[with Bloch, K.], connexion between muscle metabolism and weather. IV., A., III, 21.
Riester, O. See Dieterle, W.

Rietdijk, (Frl.) A. A. See Ketelaar, J. A. A. Rietschel, H. G., biological assay of sterilised therapeutic substances, B., 287.

Rietti, \tilde{C} . T., carotene and vitamm-A in Argentine butter, B., 612. See also Foglia, V. G.

Rietz, C. A., disintegrating machines, (P.), B., 992.

Rietz, J. H., mass feeding of sheep with copper sulphate and salt to control

gastro-intestinal parasites, B., 83.
Riewe, K. H., and Rompe, R., heatconductivity of gases at high temper-

atures. I., A., I, 354.
Rigamonti, R., structure of cupriferrocyanides. I. Copper ferrocyanide and ferrocyanides of copper and potassium. II. Ferrocyanides of copper and uni-

valent cations, A., I, 350. See also Natta, G.

Rigaud, E. See Augnste, C. Rigby, G. W. See Du Pont de Nemours & Co., E. I.

Rigg, G. B. See Wirth, H. E.

Rigg, T., Askew, H. O., and Chittenden, E., brown-heart of swedes and turnips in Nelson [N.Z.] district; a boron-deficiency ailment, B., 958.

Riggan, F. B., cupola malleable castings, B., 444.

Rigler, N. E., burette-filling device for portable reagent reservoirs, A., I, 583. See also Collins, E. R.

Rigler, R., anti-toxic and anti-allergio organic preparation (torantil) from intestinal mucous membrane, A., III, 136. Rigoni, M., pseudo-agglutination of erythrocytes in dilute suspensions, A., III,

Rigot, A., deterioration of hides and skins; new preservative procedures, B., 704. Riiber, C. N., and Sörensen, N. A., mole-

cular refraction of a-d-galactose, A., II,

Riker, A.J. Sco Conner, H.A.Rikkert, I.E., electrolytic analysis of chromium ores, B., 449. Analysis of metallic antimony, B., 1221.

Rlkovski, I. I. See Pushin, N. A.

Riley, C. S., and Hartford-Empire Co., eddycurrent control for lehrs, (P.), B., 673. Riley, G. M. See Witschi, E.

Riley, H. L., chemical aspects of the combustion of carbon, B., 312. Carbonisation process, B., 1293.

Sce also Blayden, H. E., and Carter, A. H. Riley, R. H. J. See Brit. Celanese.

Rimaschevskaja, J.A. See Schorigin, P.P.Rimattei, F., and Petit, J., preparation of pure water in the laboratory, A., I, 526. Rimbaut, J., safety rules for storage,

transportation, and handling of hydro-

carbons, B., 316.

Rimington, C., chemical constitution of acacipetalin, a new cyanogenic glucoside from Acacia la siopetala, Oliv., and Acacia stolonifera, Burch, A., II, 136. Chemical investigation of the "giftblaar," Dichapetalum cymosum (Hook), Engl, A., III, 162. Porphyrins of the I and III series in congenital porphyrinuria, A., III, 342.

and Quin, J. I., isolation of an icterogenic substance from Lippia rehmanni,

Pears, A., II, 160.

and Roets, G. C. S., duality of coproporphyrins in bovine congenital por-

phyrinuria, A., III, 459.

and Steyn, D. G., new bitter principle from South West African Cucumis species, A., II, 160. Isolation of the toxic principle from a species of Dimorphotheca (probably fruticosa), A., III, 244.

See also Fourie, P.J., and Manen, E. van.

Rin, Z. See Minaguchi, T.
Rinck, E., solidification diagram and thermal conductivity of rubidium cæsium alloys, A., I, 455.

Rinck, M. E., scaling metallic wires in glass, A., I, 153.

Rinderknecht, H. See Dodds, E. C. Rindfleisch, H., K-slope of [elements] ₁₃Al to ₁₄W, A., I, 208.

Rindin, T. V., colloid-chemical characterisation of soya proteins, A., III, 191.

Morozov, A. A., and Saltschinkin, A. P., physical chemistry of plant proteins, A., III, 191.

Rinehart, C. A. See Paddock, L. S. Rinehart, J. F., vitamin-C deficiency rheumatic fever, and rheumatoid arthritis. II. Rheumatoid (atrophic) arthritis, A., III, 405.

Greenberg, L. D., and Baker, reduced ascorbic acid content of bloodplasma in rheumatoid arthritis, A., ÎII, 125.

Greenberg, L. D., and Christie, A U., reduced ascorbic acid content of blood-plasma in rheumatic fever, A., III, 125.

See also Greenberg, L. D.

Riney, A. H., Gibbs, L. T., and Phillips Petroleum Co., transportation of hydrocarbon liquids, (P.), B., 1016.

Ring, F. See Smith, G. Frederick. Ringer, F. See Standard-I. G. Co.

Ringgenberg, H. I., and Sinclair Refining Co., asphalt, (Pi), B., 1301.

Ringier, B. H. See Karrer, P. Ringleben, O. Seo Krüger, W. Ringrose, A. T., and Norris, L. C., differentiation, between tiation between vitamin B_2 and an insoluble factor preventing a pellagra-like syndrome in chicks. I. and II., A., IIĬ, 405.

Rinkes, I. J., preparation of β -thiophenic [thiophen-3-carboxylic] acid, A., II, 72. Rinman, E. L., treatment of organic [paper-pulp] waste liquors, (P.), B., 298. Rinn, K. See Fuchs, O.

Rinoldi, detection of spontaneous deterioration of wool and cotton, B., 654.

Rintelen, J. C., jun., Saylor, J. H., and Gross, P. M., densities and vapour pressures of alkylbenzenes, aliphatic ketones, and n-amyl chloride, A., I, 405. Rintelman, W. L. See Du Pont de

Nemours & Co., E. I. Rio, J. A., concentration of syrups and

similar liquids, (P.), B., 381.

Riolo, S., ether narcosis, blocking of the reticulo-endothelial system, and tissuechloride, A., III, 477. Ether narcosis and tissue-chloride, A., III, 477. Influence of the spleen and various glands of internal secretion on experimental hypercalcæmia, A., III, 491.

Riou, P., Delorine, G., and Hormisdas, distribution of manganese and iron in

conifers in Quebec, A., III, 50.

Ripa, R. See Sloep, A. C. Ripan-Tilici, R., conductometric determination of selenoeyanide, A., I, 44. Complex piperazine-metal sulphates, A., II, 167.

and Dragulescu, C., density and viscosity of milk as indication of adulteration,

B., 180.

Ripert, J., analysis of lavender and other essences, B., 1268.

See also Belin, M.

Ripley, L. B., and Hepburn, G. A., fruit fly in citrus: sodium fluosilicate bait, B., 713.

Rippel, A., effect of small quantities of agar on growth and nitrogen fixation of Azotobacter and on the other microbiological processes, A., III, 35. Nodule bacteria symbiosis of the Leguminosæ, A., III, 182. Colldividing and -stretching growth-substance, A., III, 242. Action of iron, agar, and humus on Azotobacter, A., III, 272,

and Behr, G., energy exchange in Aspergillus niger as influenced by the supply of potassium, A., III, 271. Detoxication of sulphuric acid in cultures of Aspergillus niger, A., III, 272. Chitin in micro-organisms, A., III, 315.

Rippel, K., detection of cell-division growthsubstance by means of Saccharomyces cerevisice as test organism, A., III, 50.

Ripper, K., condensation products, (P.), B., 158. Moulding composition [from thiourea and formaldehyde], (P.), B., 158. Rippon, E. S., handling of semi-liquid materials, B., 95.

Rips, S. M. See Gelperin, I. I.

Ris, H., determination of fastness to light of dyed textiles, B., 661.

Ris, K. B., and Griscom-Russell Co., heat exchanger, (P.), B., 630.

Risch, K., determination of resistance of textile fabrics to creasing, B., 330.

Risch, W., importance of surface treatment of aluminium and aluminium alloys by electrolytic oxidation by the eloxal process in the 4-year plan, B.,

Rishov, V. P. See Kaschtanov, L. I.

Rison, C. O., and Indian Territory Illuminating Oil Co., container for [nitroglycerin] explosives, (P.), B., 396.

Riss, I. G., and Bakina, N. G., potentiometric titration of fluorides, A., I, 475.

Rist, C. E. See Hilbert, G. E. Rist, R., cause of fissure damage to riveted boiler drums, B., 507.

Rit Products Corporation. See Kritchevsky, W.

Ritchie, A. See McKenzie, A.

Ritchie, A. V. Soe Barber, E. M., and Texas Co. Ritchie, C. F. See Allen, W. H.

Ritchie, E. G., storage of steam heat, B., 95, 195.

Ritchie, G. G. See Percival, E. G. V. Ritchie, M., photosynthesis of hydrogen chloride in oxygen-rich mixtures? quantum efficiency of water formation, A., I, 370.

See also Smith, William.

Ritchie, P. D., spectrographic studies on ancient glass; Chinese glass, from pre-Han to T'ang times, B., 911.

See also Seligman, C.G.Ritchie, W. S. Seo Hogan, A. G., and

Mueller, W.S. Ritland, H. O. Seo Kirkpatrick, P.

Ritov, S. M., diffraction of light by ultrasonic waves, A., I. 557.

Ritschl, R., investigation of atomic and ionic rays, A., I, 210. and Schober, H., isotope displacement

in the neon spectrum, A., I, 103.

Rittenberg, D., and Schoenheimer, R., deuterium as indicator in study of intermediary metabolism. VIII. Hydrogenation of fatty acids in the animal organism. XI. Biological uptake of deuterium by fatty acids and cholesterol, A., III, 130, 470.

Schoenheimer, R., and Evans, E. A., jun., deutorium as indicator in study of intermediary metabolism. X. Metabolism of butyric and hexoic

acids, A., III, 422.

See also Roller, P. S., Schoenheimer, R., and Shapiro, A.

Ritter, C., value of thiosulphate-treated bottles for counts on shipped swimmingpool samples, B., 848.

Ritter, G. J. See Bird, C. D., and Van-Beckum, W. G.

Ritter, W., aldehydo-reductase in milk and influence thereon of copper and of bacterial activity, A., III, 66. Influence of heavy metals on enzyme reactions in milk, A., III, 310.

Rittmeister, W. See Du Pont de Nemours & Co., E. I.

Riusan, H., fibrous structure of paraffin, A., I, 554.

Rivard, C. A., silver flatware and hollow ware, B., 1354.

Rivas, L. Sco Simola, P. E. Rivat, G. See Brit. Celanese.

Rivelioni, G., distribution of ash in spodograms of normal human skin, A., III,

Riveuq, F., thermal decomposition of tervalent vanadium sulphate, A., I, 629. Rivier, H., and Zeltner, J., some nitro- and amino-derivatives of benzanilide, thio-benzanilide, and 1-phenylbenzthiazole, and the azoic colours derived from them, A., II, 376.

Rivière, C. See Clément, L.

Rivin, M., and Sokolik, A., explosion limits of gaseous mixtures. III. Explosion limits of mixtures of carbon monoxide and of methane, A., I, 247.

Rivkin, J., indene-coumarono resins in coatings, B., 155.
Rivkin, S. M. See Batalin, V. S.

Rivkind, T. L. See Tovarnitski, V. I.

Rivlin, I. I. See Adadurov, I. E. Rivlin, R. S. See Campbell, N. R. Rivoche, E., blackening of iron and steel

and protecting same from rust, (P.), B., 1070.

Rivoir, L. See De la Cierva, P., and Palacios, J.

Rizor, R. H., and Mid-West Abrasive Co., garnet abrasive, (P)., B., 783. Rizov, S. M. See Danilov, S. N.

Rjabinin, J. M. See Ruzman, M. Z. Rjabinin, J. N. See Schubnikov, L. V.

Rjabinovskaja, A. M., creatine-phosphagen

metabolism during ontogenesis in mammals, A., III, 18.

Rjabov, L. I., thermal properties of absorbent oils and coal tar and its fractions, B., 203.

Rjabtschikov, D. I. See Grünberg, A. A. Rjabuchin, V., influence of conditions of absorption on yield of solvent, B., 20.

Roach, W. A., latent impurities in electrodes used for spectrographic research, A., I, 332. Injection of single interveinal areas of leaves for diagnosis of mineral deficiency, B., 824. Iron "shortage" chlorosis in apple trees grown in water culture, B., 824. Leafstalk injection for diagnosis of mineral deficiency, B., 824. Injection of individual branches of a tree independently of each other, B., 824. Injection

of whole trees, B., 824. and Levy, B. F. G., iron-shortage chlorosis in the plantation, B., 824.

See also Hnlme, A. C., Levy, B. F. G., and Srivastava, D. N.

Roadhouse, C. L., and Brown, E. E., preparation of buttermilk, B., 280.

Roaf, D., reported radioactivity of 38A, A., I, 389.

Roark, R. C., Tephrosia as an insecticide: review of literature, B., 710. Lonchocarpus species (barbasco, cubé, haiari, nekoe, and timbo) used as insecticides, B., 846.

Robb, M. A., relation of calcium content of diet to rate of healing of experimental fractures in rats, A., III, 475.

Robbelen, E., manometer for very small pressure differences, B., 855.

Robbers, H., pharmacological action of cystamine, a blood-pressure lowering substance, A., III, 424.

Robbin, L., and Vega Manufg. Corp., insulated wire, (P.), B., 1364.

Robbins, B. H., [pharmacology of] cyclo-propane. I. Determination in air, water, and blood by means of iodine II. Concentrations repentoxide. quired in air and blood for anæsthesia, loss of reflexes, and respiratory arrest [in dogs], A., III, 65. See also Stoughton, R. W.

Robbins, R. C. See Miller, C. D.

Robbins, W. J., and Bartley, M. A., vitamin- B_1 and growth of excised tomato roots, A., III, 242. Thiazole and the growth of excised tomato roots, A., III, 409. Use of glucose by excised tomato roots, A., III, 500.

Bartley, M. A., Hogan, A. G., and Richardson, L. R., pyrimidine and thiazole intermediates as substitutes for vitamin- B_1 , A., III, 404.

and Jackson, J. R., effect of 3-indolylacetic acid on cell walls of stem and root, A., III, 241.

and Kavanagh, F., intermediates of vitamin-B1 and growth of Phycomyces, A., III, 432.

White, V. B., McClary, J. E., and Bartley, M. A., importance of ash elements in cultivation of excised root tips, A., III, 80,

Robbins, W. R., relation of nutrient salt concentration to growth of the tomato and to incidence of blossom-end rot of fruit, A., III, 236.

See also Wadleigh, C. H.

Robbins, W. W. See Ball, W. S. Roberg, M., occurrence and distribution of saponins in herb drugs. I. and II., A., III, 191, 447. Distribution of saponins in plant drugs, A., III, 333. Occurrence and distribution of saponins in seed drugs, A., III, 333.

Robert, (Miss) J. L., action of hydrazine and mothylhydrazine on 1:5-diehloro-2:4-dinitrobenzene and derivatives of the compounds obtained, A., II, 238. Action of hydrazine and methylhydrazine on 3 - chloro - 4:6 - dinitrophenetole and 1chloro-2:4-dinitronaphthalene and derivatives of the resulting compounds, A., II, 494.

Robert, P., eczema. IV. Action of bacterial toxins on the skin, A., III, 461. See also Schaaf, F.

Roberti, G., lubricants for motor cars, B., 110.

and Dinelli, D., resin from furfuryl alcohol. I. and II., B., 61.

Roberts, A. C., speed of absorption following the ingestion of glucose and of sucrose, A., III, 260.

Roberts, A. E., and Watkins, W., creaseresistant treatment of textile yarns, (P.), B., 775. Finishing [crease-proofing] of textile fabrics, (P.), B., 775.

Roberts, A. L., electrophoretic mobility of purified tristoarin. I. The acid region, $p_{\rm H}$ 2 to 7. II. Alkaline region, A., I, 79, 305. Mechanical properties of refractory materials, B., 1206.

Roberts, A. S., obtaining two-colour effects on cotton and rayon, and three-colour effects on cotton, rayon, and acetate

dyed in the piece, B., 660.

Roberts, C. H. M., and Petroleum Rectifying Co. of California, electric-dehydration system [for oil emulsions], (P.), B., 19.

Roberts, D. B. See Jameson, E. Roberts, D. C., and McElvain, S. M., acetoacetic ester condensation. XI. Extent of condensation of monosubstituted acetic esters, A., II, 482.

Roberts, E., effect of cysteine on hereditary hypotrichosis in the rat (Mus norvegicus),

A., III, 266.

Roberts, Eugene, and Western States Machine Co., control apparatus for centrifugals, (P.), B., 633. Roberts, E. A. H., liver xanthine oxidase, A., III, 29.

Roberts, E. N. See Standard Oil Co.

Roberts, F. S. H., biology and control of the large round-worm of fowls, Ascaridia galli (Schrank), Freeborn. VI. Control, B., 714.

Roberts, G. L., carbon gas black, B., 745.

Roberts, G. M. See Crandall, L. A., jun. Roberts, H. A., and Dickson, IV., shot-gun cartridges, (P.), B., 503.

Roberts, H. C., evaluating cotton warp sizing, B., 654.

Roberts, H. S. See White, W. P.

Roberts, I., hydrargyrum cum creta (grev powder); preparation and effects of storage, B., 496.
Roberts, Irving, and Hammett, L. P.,

mechanism of substitution reactions: reaction of benzyl chloride with mercuric salts, A., I, 417.

and Kimball, G. E., halogenation of ethylenes, A., II, 269.

Roberts, J., developments in use of solid smokeless fuels, B., 102.

Roberts, J. A., composition of citrus fruit

juices, B., 974.
Roberts, J. E., Whiddington, R., and
Woodroofe, E. G., energy losses of electrons in molecular nitrogen, A., I. 1.

Roberts, John K., kinetics of adsorption with interaction between the adsorbed particles, A., I, 561.

and Bryce, G., mechanism of production of atomic hydrogen by hot tungsten, A., I, 85.

Roberts, Joseph K. See Standard Oil Co., and Standard Oil Co. of Indiana.

Roberts, J. W., [insecticidal] spray materials, (P.), B., 715.

Roberts, K. C., and Rhys, J. A., rearrangement of o-aminodiphenyl ethers. V., A., II, 189.

Roberts, L. J. See Leverton, R. M. Roberts, O. E., controlled pyrogenic decomposition of hydrocarbons, (P.), B., 113.

Roberts, R. B., deuteron-deuteron reaction, A., I, 388.

See also Ladenburg, R., and Rumbaugh, L. H.

Roberts, R. H. (Liverpool), electrodeposition of sheet chromium, B., 146.

Roberts, R. H. (Wisconsin), Kraus, J. E., and Livingston, N., carbon dioxide exchange rhythm and fruitfulness in plants of different reproductive habits, A., III, 285.

and Struckmeyer, B. E., effect of temperature on the responses of plants to photoperiod, A., III, 235.

Roberts, S. See Lucas, Ltd., J. Roberts, W. J., detection of gold in brain and feetuses of animals injected with

sanocrysin, A., III, 214.

Roberts, W. L., and Link, K. P., determination of coumarin, melilotic acid, and coumaric acid in plant tissue, A., III, 331. Determination of coumarin and melilotic acid; rapid micro-method for determination in Melilotus seed and green tissue, B., 1388.

See also Brink, R. A.

Roberts & Co., Ltd. See Boake, A. Robertshaw, G. F., and Burton, D., oils and fats; report of a Commission of the Society of Leather Trades' Chemists, 1937, B., 1079. See also Burton, D.

Robertson, A., and Rusby, G. L., sumatrol. I., A., II, 259.

and Subramaniam, T. S., synthesis of rotenone and its derivatives. XI. Tetrahydrotubanol, A., II, 162. Constituents of bark of Zanthoxylum americanum (Mill.) III. Constitution of xanthoxyletin. V. Structure of

alloxanthoxyletin, A., II, 162, 465. See also Bell, (Miss) J. C., Birch, H. F., Bridge, W., Curd, F. H., George, S. W., Heyes, R. G., Howell, W. N., and

McGookin, A.

Robertson, B. J., motor oils, B., 869. Robertson, D. W., titanium dioxide in printing inks, B., 157.

and Hobech, W. H., improved house-

painting systems, B., 589. Robertson, G. J., and Gall, D., 2:5-dimethylxylofuranose and 2:3-dimethylxylose, A., IĬ, 444.

Robertson, G. R. See Scott, A. B. Robertson, H. F. See Carbide & Carbon

Chemicals Corp., and Cox, W. V. Robertson, H. J., and Sinclair Refining Co., demulsification of cut oils, etc., (P.), B.,

1167. Robertson, I. M. Sec Webster, M. E.

Robertson, J. B., qualitative tests for nitrogen in organic substances, A., II, 222. Robertson, J. K., and Hay, R. H., spectra of high-frequency discharges in mercury vapour. II. Comparison of electrodeless with external electrode excitation. III. Modification due to wave-length, A., I, 54.

Robertson, J. M., structure of resorcinol; quantitative X-ray investigation, A., I, 68. Structure of organic molecules by X-ray analysis, A., I, 554. and Ubbelohde, A. R., isotope effect in

hydrogen and hydroxyl linkings, A.,

I, 225. and Woodward, I., structure of the carbonyl group; quantitative investigation of oxalic acid dihydrate by Fourier synthesis from X-ray crystal data, A., I, 68. X-Ray study of ohthalocyanines. III. Quantitative structure determination of nickel phthalocyanine, A., I, 172.

See also Linstead, R. P., and Ubbelohde,

A. R.

Robertson, J. S., separation of foreign matter from grain, the products of grain, or granular material in dry condition, (P.), B., 993.

Robertson, L. H. See Standard Oil Development Co.

Robertson, (Miss) M. E. See Dempsey, (Miss) M.

Robertson, P. W., Clare, N. T., McNaught, K.J., and Paul, G.W., kinetics of bromine addition to olefinic compounds, A., I, 249. Robertson, (Sir) R., Fox, J. J., and Martin,

A. E., two types of diamond, A., I, 166. Robertson, T. A., preservation of fruits and

vegetables, (P.), B., 186.

Robertson, W. See Fischer, F. G.

Robertson Co., H. H., and Hubbell, D. S., magnesium oxychloride cement, (P.), B., 677.

See also Young, J. H.

Robey, R. F., and Dix, W. M., magnetism and chemical constitution, A., I, 605. See also Quill, L. L.

Robezniece, I., acidity of flour fat, B., 721.
Robiette, A. G. E., bright annealing of metals, B., 688. Developments in electric heat treatment furnaces, B., 936. See also Birmingham Electric Furnaces.

Robins, S. D., and Robins Conveying Belt Co., screening apparatus, (P.), B., 1146. Robins Conveying Belt Co. See Robins, S. D.

Robinson, A. H. A., nickel in Canada, B., 144.

Robinson, A. M. See Bachmann, W. E.,

Cook, J. W., and Haddow, A.
Robinson, B. See MacIntire, W. H.
Robinson, C., effects of traces of metallic ions on monolayers, A., I, 301.

Robinson, C. H. See Watson, C. J. Robinson, C. S. See Robinson & Son,

Ltd., T.

Robinson, E. J., and Hegnauer, A. H., water and electrolyte distribution between plasma and red blood cells after 'intraperitoneal injections of isotonic glucose, A., III, 54. See also Hegnauer, A. H.

Robinson, E. M. See Mason, J. H. Robinson, F. W., Larsen, C. J., and Hanovia Chem. & Manufg., Co., apparatus for irradiating liquids, (P.), B., 1075.

Robinson, H. A., spectral intensities in the far ultra-violet and deduction of temperatures and pressures in vacuum sparks, A., I, 1. Helium I like spectra. A., I, 103. Spectra of phosphorus. II. Spectra of P III, P IV, and P V; additions and corrections to PII, A., I, 335.

See also Boyce, J. C.

Robinson, H. E., Gray, R. E., and Newton, R. C., white rats as experimental animals in study of the soft-fat problem, A., III, 62.

Robinson, H. R., relative and absolute values of atomic levels, A., I, 15. X-Ray levels and atomic constants. II., A., I, 56.

Robinson, H. W., Price, J. W., and Hogden, C. G., determination of albumin and globulin in serum. I. Errors involved in the filtration procedure, A., III, 411.

Robinson, J. See Standard Oil Co. Robinson, J. D. See Nat. Aniline & Chem. Co.

Robinson, J. L., prevention of surface damage to metals by furnace atmosphere

control, B., 446.
Robinson, J. T., manufacture and characteristics of Hiduminium RR. alloys, B., I066.

Robinson, P., Collins, J. L., and Sprague Specialties Co., electrolytic device [condenser], (P.), B., 583.

and Sprague Specialties Co., electrolytic device [condenser], (P.), B., 362.

Robinson, P. B., recent improvements in refractory materials, B., 241.

Robinson, R., constitution of tetranitromethanc, A., II, 43. Projected synthesis of testosterone, A., II, 294.

and Smith, L. H., oxidation of cyclo-hexanone and subcrone by Caro's acid, A., II, 196.

and Walker, James, synthesis of substances related to the sterols. XV. XVII. 8-Methylhydrindan-I-one, A., II, 196, 422.

See also Abraham, E. P., Adamson, P. S., Ainley, A. D., Appel, H., Baker, W., Barger, G., Du Feu, E. C., Goldsworthy, L. J., Lin, K. H., Meggy, A. B., Micovic, U. M., Openshaw, H. I., Perkin, W. H., jun., Price, J. R., Raistrick, H., and Richardson, T.

Robinson, R. A., osmotic and activity coefficient data of aqueous salt solutions from vapour-pressure measurements, A., I, 135.

Robinson, R. A., and Bell, R. P., partial molar volume of water and deuterium oxide in dioxan solution, A., I,

and Davies, C. W., conductivity of univalent electrolytes in water, A., I,

See also Davies, C. W.

Robinson, R. G., determination of antimony in lead-rich alloys, B., 572.

Robinson, R. J., and Spoor, H. J., photometric determination of silicate in seawater, A., I, 45.

Robinson, R. R., soil properties determining botanical composition of pastures in West Virginia, B., 1100.

Robinson, S. C., and Continental Can Co., process and container for packaging

beverages, (P.), B., 1405.

Robinson, T. W., and Woodside, G. L., auxin in the chick embryo. I. Its presence and change in concentration with age, A., III, 502.
Robinson, W. E. See Standard

Development Co.

Robinson, W. H. See Kent, N. A. Robinson & Son, Ltd., T., and Robinson, C. S., sieving machines, (P.), B., 510.

Robinson & Sons, Ltd. See Pashley, E. Robinson Bindley Processes, Ltd., and Aicher, A. A., controlling temperature of exothermic reaction chambers, (P.), B., 856.

Robinson Brothers, Ltd., Parkes, D. W., and Evans, R. B., removal and recovery of acidic gases, (P.), B., 1010.

Parkes, D. W., and Mitchell, C. D., purification of gases and liquids from carbon disulphide, (P.), B., 1010.
Robison, F. W., Porter, H. J., and Elmer,

G. D., treatment of fruit juices, (P.), B., 495.

Robison, P. L. See Oberseider, J. L. Robison, R. See Macfarlane, M. G.

Robitzsch, J., growth and water economy of German varieties of field bean, B., 1103.

Roboz. See under Roboz-Rosenblüh. Roboz-Rosenblüh, E., and Vavrinecz, G., determination of invert sugar (and other reducing sugars) without filtration of cuprous oxide, A., II, 325. Examination

of tomatoes and tomato preserves, B., 1126. Robscheit-Robbins, F. S. See Daft, F. S., and Whipple, G. H. Robson, H. A. See Pearson, T. F.

Robson, H. C., copper refinery furnace firing and refractories, B., 1219.

Robson, H. L. See Cunningham, G. L. Robson, J. M., maintenance of pregnancy in the hypophysectomised rabbit with progestin, A., III, 150. Action of progesterone on the uterus of the rabbit and its antagonism by æstrone,

A., III, 361. and Schönberg, A., cestrous reactions, including mating, produced by tri-phenylethylene, A., III, 361.

See also Bell, G.H.Robson, T.D. See London, J.D.

Rocha e Silva, M., combined action of eosin and light; action of catalase in photodynamic phenomena; inhibitory action of catalase on the oxidation of potassium iodide by irradiated eosin, A., III, 96. Action of irradiated eosin on the system potassium iodide-catalase as a model of photodynamic action, A., III, 96,

Rochaix, A., and Vieux, G., Bacterium pyocyaneum and drinking waters, A., III, 434.

See also Morel, A.

Roche, A., Samuel, L., and Arthaud, R., precipitation of scrum-proteins by ammonium sulphate; significance of fractionation at various concentrations of the salt, A., III, 371.
Reche, H., fine-filament rayon spinning by

the viscose process, B., 25. Application of

latex to rayon yarns and fabrics, B., 662.

Roche, J., and Bénévent, M. T., cytochromes. III. Hæmatins of animal and vegetable tissues and cytochromea. IV. Hæmatins-C and their combination with globin, A., III, 9, 296.

and Combette, R., physical state of globin and mol. wt. of methamoglobin obtained by reaction of protohæmatin with globin, A., III, 111. Osmotic pressure and mol. wt. of various erythrocruorins, A., III, 164. Erythrocruorins (hæmoglobins of invertebrates), A., III, 289. Globins. IV. Combination of globins with protohematin and the mol. wt. of synthetic hæmoglobins, A., III, 290.

and Filippi, A., activity of the phosphatase of the long bones [of rats] at various stages of growth, A., III, 394.

and Latreille, M., phosphatases of liver; phosphomonoesterases and phosphodiesterase, A., III, 313. Specificity of the phosphatases; phosphomonoesterase A_1 , A_2 , III, 314. and Morena, J_2 , oxidation and reduction

of helicorubin, A., III, 83. Spectra of helicorubin and oxyhelicorubin, A.,

III, 83.

Olmer, J., and Samuel, L., proteins of transudates (ascites) and of serum, A., III, 290. Rochel, J. H. See Brady, J. J.

Rochelmeyer, H., solanidine-t and -s, A., II, 80. Sterin alkaloids, A., II, 356.

Rochester, G. D., band spectra of SiH and SiD, A., I, 7. Band spectra of SbF and BiF, A., I, 216.

Rochlina, M. L., antagonism between carotene and the hormone of the thyroid gland, A., III, 323.

and Katznelson, A. S., relation between diet and changes in the albumin content of blood-serum in birds, A., III, 303.

Rochlina, S. L. See Kogan, A. M. Rochow, T. G., and Mason, C. W., breaking emulsions by freezing, A., I, 28. Rockstroh. See Fritzweiler.

Rockwell, G. A., and Patent Eng. Corp., viscosimeter, (P.), B., 307. Rockwell, F. V. See Garvey, P. H.

Rockwell Co., W. S. H. J. N. See . Voltmann,

Rockwood & Co., [conching paste for] chocolate, (P.), B., 1130.

and Singer, A. A., cocoa [cacao] butter butter for shipment and transportation packages for use therewith, (P.), B., 367.

Rodda, J. L., etching and microscopical investigation of phases in the copperzinc system, A., I, 297.

See also Truesdale, E. C. Roddy, W. T., grain wrinkles [on skins and leather], B., 69.

O'Flaherty, F., and Moore, E. K., microscopy of [fat] spew on glazed kid leather, B., 475.

Rode, A. A., degree of podsolisation of soils, B., 1096.

Rode, E. J., palladium-silver alloys, A., I, 127.

Rodebush, W. H., absolute rate of a chemical reaction: formal thermodynamic treatment, A., I, 33. Reactions of oxygen and hydrogen at low pressures, A., I, 254. Reaction between nitric oxide and atomic oxygen, A., I, 568.

Wende, C. W. J., and Campbell, R. W., formation of water and hydrogen peroxide at low pressures, A., I, 627.

See also Buswell, A. M. Roden, H. See Texas Co.

Rodenkirchen, J., Hofius method [of preserving milk], B., 722. Mycology of Tilsiter cheese. V. Properties of silage milk, B., 1262.

Rodenwold, B. W., and Simms, B. T., iodine for brood marcs, A., III, 14.

Roderick, L. M., Harshfield, G. S., and Hawn, M. C., pathogenesis of ketosis; pregnancy disease of sheep, A., III, 379.

Rodewald, \hat{Z} ., and Plazek, \hat{E} ., preparation of 2-pyridyl-N-pyridinium derivatives, A., II, 77. Direct iodination of pyridine, A., II, 304. See also Plazek, E.

Rodgers, E., polarisation of hard X-rays, A., I, 55.

Rodgers, E. V., waterproofed plastic paper,

(P.), B., 130.

Rodhain, P., possible modes of occurrence of gas in coal, B., 1291.

Rodiek, H., new materials for domestic water-pipes, B., 398.

Rodine, M. T., and Herb, R. G., effect of CCl, vapour on dielectric strength of air, A., I, 221.

Rodionov, V. M., antiscorbutic properties of methyl 2-ketogluconate, A., III, 283.

and Fedorova, A. M., Cannizzaro reaction, A., II, 347. Analogues of damascenine. I. Synthesis of methyl esters of dimethoxy-N-methylanthranilic acids, A., II, 419. Unexpected complication in the replacement of a

diazo-group, A., II, 499. and Levtschenko, V. V., electrolysis of aromatic acids. III. Benzaldehyde-2-carboxylic acid, A., II, 101.

Levtschenko, V. V., and Zvorikina, V. C., electrolysis of aromatic acids. IV. Electrolysis of phthalic acid, A., II,

Smarin, A. I., and Abletzova, T. A., preparation of acetic anhydride and homologues, A., II, 397.

and Zvorikina, V. C., electrolysis of aromatic acids. V. Electrolysis of hemipinic acid, A., II, 291.

Rodionova, N. I., analysis of chromium oxide, B., 1199.
Rodman, C. J., Hecht, M., and Jones,

C. L., purification of oils, (P.), B., 521.

Rodman, E. See Haught, J. W. Rodman, G. See Kozlov, N.

Rodolico, F., granular forms of melilitic rocks, A., I, 433.

Rodriguez, A. O., coating of ferrous bodies with other metals [zinc or cadmium], (P.), B., 357.

Rodriguez, F. L., protein supplements in poultry rations. VIII. Optimum amount of mungo which may be used in a normal ration for growing chicks, B.,

Rodriguez, G., effects of liming soil on composition of sugar cane, B., 480.

Rodriguez Velasco, J., and De la Borbolla, J. R., organic reactions; velocity as a means of appreciating steric molecular constitution, A., I, 142. Hydrolysis of acid chlorides. II. Thionyl and sulphuryl chlorides, A., I, 367.

and Ollero, A., hydrolysis of acid chlorides. III. Benzoyl, o-methylbenzoyl, and phenylacetyl chlorides. IV. Acetyl,

propionyl, and butyryl chlorides, A., I, 367, 571.

Rodt, R. V., hardening of lime-mortar. III., B., 555.

Rodt, V., setting of Sorel cement, B., 1344.

Rodwell, A. G., Barker, S. G., and Flexatex, Ltd., maintenance of moisture content in textiles, (P.), B., 434. Plastic compositions [for floor coverings], (P.), B., 468.

and Flexatex, Ltd., [treatment of] rubber latex, (P.), B., 474.

Rodzaevskaja, V. D. See Tokmanov, V. E.

Roe, C. P. See Jordan, H. F.
Roe, E. M. F. See Burrows, H., and
Mayneord, W. V.

Roe, J. H., determination of ascorbic acid as furfuraldehyde and comparison of results obtained by this method and by indophenol titration, A., III, 79.

and Hudson, C. S., physiological availability of heptoses, A., III, 470.

Roe, J. R., and Barnum, G. L., antiscorbutic potency of reversibly oxidised ascorbic acid: enzyme in blood which reduces the reversibility oxidised vitamin, A., III, 281. Roe, R. M. See Standard Oil Co. of

Indiana.

Röbbelen, E., manometer construction for very small pressure differences, A., I, 636. Roebling, W. See Berg, R. Roebuck, J. R., and Cram, W., multiple-

column mercury manometer, A., I, 203. Multiple-column mercury manometer for pressures to 200 atmospheres, A., I, 429.

Röchling'sche Eisen-Stahlwerke G.m.b.H., phosphatic fertilisers, (P.), B., 482.

Roeder, C. H. See Fiock, E. F. Roeder, E. See Harteck, P.

Roeder, G. H., and Bio Reduction Corp. of New York, treatment of decomposable organic matter, (P.), B., 850.

Roeder, H., centrifugal casting of nonferrous metals and its importance in the economising of foreign [non-German] raw materials, B., 929.

Rögener, H., origin and mobility of colour centres in alkali halide crystals, A., I,

Roegiers, improvement of mineral lubricat-

ing oils, B., 871.
Roehe, H. A., butter flavour, B., 612.
Röhling, H. See Metzger, R.

Röhling, J., and Kimenkowski, E., [glass] insulation of electric wires, (P.), B., 583.

Roehm, G. H. See Smith, Margaret C. Röhm, O., organic glass, B., 154. Preparation of stable alkali polysulphides and of preparations containing them, (P.), B., 342. Electrical resistances, (P.),

B., 695. Röhm & Haas Akt.-Ges., compound glass, (P.), B., 38. Polymerisation of unsaturated organic compounds, (P.), B., 64. a-Methylacrolein [a-methylacraldehyde], (P.), B., 118. Monomeric methacrylic acid esters, (P.), B., 325. Esters of methacrylic acid, (P.), B., 877.

Röhm & Haas Akt.-Ges., condensation products of methylacrylamide and formaldehyde, (P.), B., 946. [Resinous] interpolymers of methylacrylamide, (P.), B., 946. Sizing of artificial silk, (P.), B., 1330. Moulded [methacrylic ester] polymerisation products, (P.), B., 1372.

Röhm & Haas Co., hydroaromatic alcohols, (P.), B., 65. Complex phenolic soaps, (P.), B., 153. Catalytic hydrogenation [of glycerides], (P.), B., 259. Resinous products derived from derivatives of diphenylol - [di(hydroxyphenyl)]meth ane, (P.), B., 700. tert. Alkylaryloxyalkylols [-alkanols and their hydrogen sulphates: wetting agents, etc.], (P.), B., 760. Recovery of hydrocyanic acid, (P.), B., 778. Water-soluble phenolic derivatives [germicidal, wetting, etc., agents], (P.), B., 1023. Alcohols [resins, etc.], (P.), B., 1171. Hydrogenation of esters of carboxylic acids, (P.), B., 1173.

See also Bruson, H. A., Powers, D. H., Stein, O., Thrley, H. G., and Ziegler,

Roehner, T. G. See Herrmann, L. A. Roehrich, E. See Lampe, B.

Röhrig, H., attack of light metals by water; addition of inhibitors, B., 577. Remelting aluminium in the foundry, B., 926.

and Käpernick, E., spot-welding of dissimilar light-metal sheets, B., 577.

and Schönherr, K., tensile strength and elastic limit of refined aluminium sheet, B., 450.

Roelfsema, P.J. See Bataafsche Petroleum Maats.

Roelig, H., technical properties of synthetic rubber and new methods of measurement in manufacture of Buna [synthetic rubber] products, B., 1244. New testing methods for soft rubber, B., 1245.

Roemmele, O., influence of reaction on peroxidase test in milk products, B., 79. Rönnmark, B. See Patel, R. P.

Roepke, M. H., choline esterase, A., III,

Roesch, A., condensation of acetaldehyde with ethyl malonate, A., II, 483.

Roesch, A., jun., and Radecker, W., treatment of material which is passed through baths, such as salt-quenching, annealing, or galvanic baths, (P.), B.,

Roesch, K., physical and chemical properties of high-alloy chromium cast iron, B., 559.

Röscheisen, P., and Brettner, P., universal micro-desiccator, A., I, 429.

Roesner, G., recovery of sulphur from waste gases, B., 436. The Sulfidin process, for utilising gases containing sulphur dioxide, B., 665.

Roess, L. C., determination of critical temperature and pressure of petroleum fractions by a flow method, B., 10. See also Keith, J. R.

Rösseler, G., precision method for determination of molecular polarisation of non-dissociating liquids, A., I, 12.

Rössler, F. See Krefft, H. Roessler, G., glass ductility and parison distribution, B., 1048.

Rössner, K., mechanical technology of soaps. III. Milling, stamping, and

packing, B., 151. Rötger, H. See Bennewitz, K. Roets, G. C. S. See Rimington, C. Roffo, A. E. See Roffo, A. H.

Roffo, A. H., and Correa, L. M., respiratory quotients of normal and neoplastic tissues, A., III, 172. and Roffo, A. E., ionisation of air by

irradiated cholesterol, A., I, 63.

Rogalev, I. E. See Konovalov, I. N. Rogan, H. See Shutt, W. J.

Roganova, D. P. See Kiesel, A.

Roganova, K. See Erastova, R. Rogatschev, V. I., free and bound water in agar gels, A., I, 133.

Rogatz, H., geology of Texas Panhandle oil and gas field, A., I, 381.

Roger, L. See Demassieux, (Mme.) N. Roger, M., and Dvolaitzka, F., esters oger, M., and Dyoiauzaa, ..., derived from heptyl alcohol, A., II, 480. Roger, R., stereochemical structure. VIII. stereochemical relationship of the a-

and the β-forms of substituted hydrobenzoins; ethylhydrobenzoin (a-form), A., II, 415.

and Harper, F. C., dehydration of aadiphenyl-β-o-tolylethylene glycol, A., II, 190.

Rogers, A. O. See Nelson, R. E.

Rogers, B. A., speeding up steel refining, B., 558.

and Stamm, K. O., magnetic properties of a series of basic open-hearth slag samples, B., 1211. Rogers, D. A. See Sheard, C.

Rogers, D. G. See Nat. Aniline & Chem. Co. Rogers, E. F., and Freudenberg, W., aconitum alkaloids. III. Products of degradation of aconite bases, A., II,

See also Freudenberg, W.

Rogers, F. M. See Standard Oil Co. Rogers, F. T., jun., theory of the electrostatic β-particle energy spectrograph, A., I, 153. Ionisation of gases by high-energy β -particles, A., I, 210. Precise measurement of three radium-B β particle energies, A., I, 275.

Rogers, G. E., bricks, etc., (P.), B., 347. Rogers, J. S., photographic action and absorption coefficients of y-rays, A., I,

Rogers, L. A., and Evans, F. C., use of trisodium phosphate in cleaning dairy

equipment, B., 1124.
Rogers, L. H., and Gall, O. E., microdetermination of zine [in plant materials]; comparison of spectro-graphic and chemical methods, A., III, 108.

See also Williams, D.

Rogers, L. N., determination of cellulose value of lint for chemical industry, B., 1033.

Rogers, M. A. T. See Imperial Chem. Industries.

Rogers, M. C., and Thiele, E. W., bubblecap column as a liquid-liquid contact apparatus, B., 854.

Rogers, R. \hat{R} ., plating of zinc from ammonium sulphate-zinc baths, B., 1069.

See also Armstrong, P. A. E. Rogers, T. H., Voorhees, V., and Gasoline Antioxidant Co., motor fuel products, (P.), B., 211. Rogers, W. B. See Cooper, H. P.

Rogers, W. F., and Shellshear, W. A., corrosion of steel by oil-well waste

waters, B., 566.
Rogers, W. S., soil moisture. I. Water utilisation by apple trees in cultivated and grass orchard, compared with fallow land, B., 823.

Rogers, W. S., and Srivastava, D. N., soil moisture. II. Moisture variation in a

pear orchard, B., 823. Roginskaja, E. V., composition of phenolic and acidic fractions of wood-spirit oil from generator gas plants, B., 1154.

Roginski, S., rôle of supersaturation in production of catalysts, A., I, 35.

and Schechter, A., chemical reactions in electric discharges. III. Heterogeneous recombination of atoms, A., I, 574. Cracking of oils by condenser discharges, B., 750.

See also Brejneva, N., and Motschan, I. Rognone, M. Seo Masino, O.

Rogoff, J. M., determination of adrenaline

in blood, A., III, 436. and Nixon, E. N., adrenaline secretion in animals with experimental diabetes, A., III, 124.

Rogov, N. A. See Masliev, I. T.

Rogovin, S., and Glasman, S., heterogeneity of cellulose nitrates, and properties of fractions prepared from them. II. Fractionation of cellulose nitrate, B.,

and Joffe, M., causes of gelation of primary cellulose acetate, B., 1033.

and Schlachover, M., structure viscosity and properties of solutions of cellulose esters. II. Influence of ash content of cellulose nitrate on the viscosity of collodion solutions, A., I, 182, 239.

See also Guth, E. Rogoziński, F., and Glówczyński, Z., behaviour in the animal organism of fat-solublo dyes, A., III, 93.

Roguleva, L. See Danilov, S. N. Rohde, L., [dielectric losses at frequencies

of 1-5×10° Hz.], A., I, 221. Rohdenburg, G. L. Seo Rafsky, H. A. Rohdewald, M. See Willstätter, R.

Rohland, W. See Braun, J. von.

Rohlin, V. A., and Cochrane Corp., waterpurifying and -degasifying apparatus, (P.), B., 850.

Rohmann, C., and Mirus, W., one-third basic aluminium acetate. II. Degree of hydrolysis and activities of hydrogen and acetate ions in relation to concentration and temperature. III. Further properties of the solution, A., I, 184, 616.

Rohmer, J. See Lapp, C. Rohmer, P., and Bezssonoff, N., pathogenesis of scorbutic dystrophy, A., III, 125.

Rohner, F., quantitative emission spectral analysis of aqueous solutions, A., I, 630.

Rohner, L. V. See Kniskern, W. H.
Roholm, K., fluorine poisoning in cryolite
workers, A., III, 351. Fog disaster in the Mouse Valley, 1930: a fluorine intoxication, B., 625.

Rohonezi, G. See Schläpfer, P.

Rohrbach, E., [nicotine content of] to bacco smoke, B., 1132.

Rohrlich, S. G., separation of coal portions poor in ash from those rich in ash, (P.), B., 409.

Rohrman, E. See Osborn, W. O., and Williams, R.J.

Rohrman, F. A., non-metallics in the chemical industry, B., 1141. See also Seeber, R. \hat{R} .

Rohrmann, W. See Komppa, G., and

Linke, R.

Roig, $J_{\cdot,\cdot}$ electrical and optical measurements on illumination of helium in highfrequency discharge, A., I, 271. Roisin, M. B. See Rubentschik, L.

Rojahn, C. A., capillary analysis at constant temperature and humidity, A., I, 100. Luminescence analysis of drugs, B., 287. Drop-capillary analysis; identifying pharmaceutical drugs, B., 496. Determination of Tillmans' chloroamine value of essential oils, B., 1047.

Rojas, F. A., and Rojas Chem. Works, electrolytic deposition of chromium,

(P.), B., 933. Rojas, P. See Policard, A.

Rojas Chemical Works, Inc. See Rojas, F.A.Rojek, J., apparatus for determining the permeability of rubbered fabrics to gases, B., 533.

Rokitianski, I. V. See Pigulevski, G. V. Rokitskaja, M. S. See Melnikov, N. N. Roko Corporation. See Coberly, C.J.

Rokusho, B., Tanaka, R., and Saito, H., glutamic acid. I.—IV., A., III, 455.

See also Kamazuka, A.

Roland, C. T., flavins of milk, A., III, 9.
Sorensen, C. M., and Whitaker, R.,
oxidised flavour in pasteurised milk, B., 722.

and Trebler, H. A., effect of fat content on oxidised flavour in milk and cream, B., 970.

Roland, G., magnesium requirements of

sugar beet, B., 956.

Roland, J. R., and McElvain, S. M., reaction of monosubstituted malonic esters and methylenedimalonic esters with sodium ethoxide, A., II, 85.

Rolfe, A. C., and Alcock, G. P., determination of acid values of oils by potentiometric titration using the glass electrode, B., 1081.

Rolte, R. T., steels at elevated temper-atures, B., 791. Selection of steels for service, B., 1350.

Roll, F., cast crankshafts, B., 245. Detection and determination of sulphite [cellulose] waste liquor, B., 505. Testing further (solid) core binders, B., 575. Rhythmic crystallisation in slags, B., 788. Spatial form of graphito [in cast iron], B., 789.

Roll, K. V. See Korschun, G. V.

Rollason, E. C., metal-spraying processes and some characteristics of the deposits, B., 930. Porosity in [metallic] spraying coatings and its measurement, B., 1067.

Rolle, C. See La Que, F. L.

Rollefson, G. K., photochemical behaviour of the aldehydes, A., I, 255. Chemistry of some photo reactions in nonideal solutions, A., I, 574.

and Faull, R. F., effect of iodine on rates of decomposition of formaldehyde, acetaldehyde, and propaldehyde,

A., I, 314.

and Libby, W. F., primary photochemical processes in solution, A., I, 470. See also Faull, R. F., Fletcher, C. J. M.,

and West, H. L.

Roller, P. S., size distribution of ceramic powders as determined by a particlesize air analyser, B., 781. Law of size distribution and statistical description of particulate materials, B., 852.

Rittenberg, D., and Gabriel, A., preparation of laboratory refractory crucibles, A., I, 50.

Rollett, A., Birkner, R., and Posselt, K. R., azo-dyes. II., A., II, 97. [with Birkner, R., Posselt, K. R., Hoch-

strasser, J., and Stern, J.], azo-dyes. III., A., II, 411.

Rollier, M. A., preparation of a source of pure polonium suitable for structural analysis by means of electron beam diffraction, A., I, 258.

Hendricks, S. B., and Maxwell, L. R., crystal structure of polonium by electron diffraction, A., I, 18.

Rollwagen, W. Sco Gerlach, W. Romac " Motor Accessories, Ltd. See Boyce, R. D.

Romani, B., absorption of atmospheric moisture by roasted coffee, B., 836.

and Olivari, L., analysis of biscuits made from butter and related products, B.,

Romaniello, R., normal and alimentary blood-sugar levels during menstruation, A., III, 451.

Romanjuk, A.N. See Tananaev, N.A. Romankevitsch, I. See Angenitzkaja, R.Romanoff, A. L., and Sullivan, R. A., refractive index of egg-white; changes with age, season, and development, A., III, 168.

Romanov, V. I., measurement of dielectric constants and absorption coefficients with short waves, A., I, 115. Theory of the measurement of dielectric constants and absorption coefficients in the region of short waves, A., I, 396.

and Eltzin, I. A., dielectric constants of solutions of some alcohols in benzene,

A., I, 444.

and Fastovski, V. G., preparation of ncon-helium mixtures, B., 906.

Romanov, V. M. See Gavrilov, N. I. Romans, R. G. See Bernstein, H. J. Romaschev, G. I., mathematical expression

of the process of swelling of soluble and insoluble colloids, A., I, 305. Romberg, G. F. von. See Stempell, W.

Romeo, A., determination of pectic substances in fruit and vegetable juices, B., 1264.

Romen, I. C., difficult [wine] clarifications, B., 607.

Romig, G. C., new rustproofing process resists distortion, B., 1352.

Romijn, C. See Roos, J. Romisch, V. P. See Starobinetz, C. L. Romodin, G. A. See Ivanov, P. N.

Rompe, R., recombination of diatomic molecules with emission of radiation, A., I, 67.

See also Pirani, M., and Riewe, K. H. Romwalter, A., carbon disulphide from sulphide ores, B., 1308.

Sce also Széki, J. Roncato, A. See Ducceschi, V.

Ronceray, P., drops of concentrated copper sulphate solution on impure iron, polished and dust-free, give rise to halo," "film," and an effect resembling that of Evans, A., I, 42. In free air, corrosion of iron by drops of copper sulphate solution is determined by three mechanisms: local element, salt concentration cell, and circular Cu-Fe element, A., I, 42. The Evans effect with impure iron is determined by humidity and by concentration of the salt solution, A., I, Evans effect on impure iron due to active dusts, A., I, 322. Corrosion of metals, B., 145.

Rondolin, L. See Peek, Frean & Co. Rondoni, P., production in vitro of cestro-

genic substances, A., III, 101. and Beltrami, W., influence of carcinogenic substances on enzymic processes, A., III, 428.

Rondoni, P., Carminati, V., and Corbellini, A., supposed estrogenic action of a cholesterol preparation, A., III, 321.
Ronneberg, C. E., production of electro-

types, B., 1229.

Ronsick, E. H., gas in the "oil laundry"; (recovery of automotive lubricating oil), B., 408.

Ronzio, A. R. See Ekeley, J. B. Roodenburg, J. W. M., artificial light in growing of greenhouse plants, B., 958. Roof, J. G. See Blacet, F. E. Rooke, R. M., Saacke, F. C., and Air

Reduction Co., welding and fusing [stainless-steel] metal, (P.), B., 799.

Rooksby, H. P. See Randall, J. T. Rooney, J. H. See Brit. Celanese.

Rooney, T. E., Stevenson, W. W., and Raine, T., heterogeneity of steel ingots. IV. Determination of oxygen in steel; alcoholic iodine method for separation of

oxides in steel, B., 1349. Roos, C. K., Offutt, J. S., Scholz, H. A., and U.S. Gypsum Co., acoustical paint, (P.), B., 1242.

and U.S. Gypsum Co., [wallboard] core composition, (P.), B., 677.

Roos, J., and Koopmans, S., duration of the digestion of different foods in the digestive tract of the dog, A., III, 381. and Romijn, C., respiration in the dog.

I. Alveolar air and respiratory data, A., III, 369.

Roos, O. See Goy, S.

Roseboom, A., refining fatty oils with ethanolamine, B., 938. Use of pure ammonia in irrigated agriculture, B., 954.

Root, H. F., White, Priscilla, Marble, A., and Stotz, E. H., clinical experience with protamine insulinate, A., III, 492.

Root, W. S., lactic acid in dogfish nerve, A., III, 471.

Roper, E. A. See Sherwood, T. C. Roper, E. E., physical method of drying liquefied hydrocarbons, A., II, 476.

Roper, T. D., jun. See Union Carbide & Carbon Corp.

Roques, H. See Fourment, P.

Roš, M., experiences, problems, and future developments of Swiss cement standards, B., 1344.

Rosa, A., influence of calcium and potassium chlorides on production of agglutinins anti-O and -II, A., III, 251.

and Maccolini, R., action of organic salts on the development of the bovine type of tubercle bacilli, A., III, 398.

Rosa, E., lattice distance and refractive index in crystals of bismuth and anti-

mony, A., I, 228.
Rosales, M. A., extraction of sugar-cane wax, (P.), B., 276.
Rosanova, V. See Gillam, A. E., Lederer,

E. A., and Sadikov, V. S.

Roschen, H. L., and Lehmann, W. J.,
applicability of the Stamm reaction for rancidity [of oils, etc.], B., 941.
Roschmann, E. M., eigarette paper, (P.),

Roscoe, M. H. See Copping, A. M.

Roscoe, R., excitation of the C state of hydrogen by electron impact, A., I, 437. See also Andrade, E. N. da C.

Rose, A., steel hardening; transition processes at increased cooling velocities, B., 1213.

See also Wever, F.

ose, Arthur, apparatus for fractional distillation of liquefied gases, A., I, 50. Rose, B. L. See Standard Oil Co.

Rose, C. F. M. See Cruse, J. E. J. Rose, C. H., progress in lead pigments, B., 809.

Rose, C. L. See Chen, K. K.

Rose, D. H., and Gorman, E. A., jun., handling, precooling, and transportation of Florida strawberries, B., 283.

Rose, E. H., and MacDonald, W. separation of [oxidised] solids [froth] flotation, (P.), B., 692.

Rose, F. L. See Imperial Chem. Industries.

Rose, F. W., jun., infra-red absorption of nineteen hydrocarbons including ten of high mol. wt., A., I, 549. See also White, J. D.

Rose, G. E. See Schwartz, E. H.

Rose, H. J., and Atlantic Refining Co., [paraffin] wax composition, (P.), B.,

See also Riegel, C.

Rose, H. W., determining colour density [or translucency] of liquids, (P.), B., 636. Rose, J. E., high-vacuum technique, A.,

Rose, J. L., and Stranathan, R. K., geologic time and isotopic constitution of radiogenic lead, A., I, 4.

Rose, L. See Courtaulds, Ltd.

Rose, M., and Hamon, M., chemical conditions of the bursting and dehiscence of the spermatophores of some cephalopods, A., III, 263.

Rose, M. E., relativistic wave functions in the continuous spectrum for the

Coulomb field, A., I, 215.

and Bethe, H. A., nuclear spins and magnetic moments in the Hartree model, A., I, 163, 435.

See also Bethe, H. A.

Rose, M. S., and Phipard, E. H. F., vitamin- B_1 and $-B_2$ values of peas and Lima beans under various conditions, A., III, 495.

See also Vahlteich, E. M.

Rose, R. A. See Wilson, G. C. Rose, W. C., nutritive significance of the amino-acids and certain related compounds, A., Ill, 468.

See also McCoy, R. H., and Womack, M. Rose, W. G., and Haller, H. L., β -octyl thiocyanate, A., II, 45.

See also King, F. B.

Roseberry, H. H., and Bearden, J. A., effects of chemical combination on widths and asymmetries of X-ray lines, A., I, 540.

Rosebury, T., and Karshan, M., susceptibility to dental caries in the rat. V. Influence of calcium, phosphorus, vitamin-D, and maize oil, A., III, 460.

Karshan, M., and Foley, G., susceptibility of rats to dental caries, A., III, 13. Rosedale, J. L., and Chong, L. P., relation of vitamin-B and -C in regard

to beri-beri, A., III, 495. and Oliveiro, C. J., fat-soluble vitamins

of tropical food oils, B., 807.
Roselius, W., caffeine-free coffee, B., 388.

Rosell, D. Z., and Argüelles, A. S., soil types and growth of algæ in fishponds, B., 478.

See also Alicante, M. M.

Rosen, $B_{\cdot \cdot}$, and Mat, $J_{\cdot \cdot}$, isotopic effect in resonance series of Te₂, A., I, 540. and Morguleff, (Mlle.) N., spectroscopic

study of the constitution of sulphur vapour, A., I, 103
Rosen, H., and Thompson, M. R., pharmacology of pyrethrum flowers, A., III, 391. Rosen, H. R., over-summering of fireblight pathogen: spraying for control of fire-blight: abscission induced by Erwinia amylovora and Phytomonas syringæ, B., 274. Spraying, pruning, and die back [of roses], B., 712.

Rosen, J. See Smith, R. A.

Rosen, R. Sec Standard Oil Development Co. Rosen, S. H. See Perla, D.

Rosen, U. See Hedvall, J. A.

Rosenbaum, A. H. See Lang, H. M. Rosenbaum, E., preparation of baker's yeast, B., 383.

Rosenbaum, H., effect of the lung on lactic acid content of the blood, A., III,

Rosenberg, E., and Happel, P., device for radioactive impregnation of materials, (P.), B., 1075.

Rosenberg, F., spot- and scam-welding of light metals, B., 577. Atomic arcwelding of light metals, B., 687. Rosenberg, H., physico-chemical basis of

electrotonus, A., III, 387.
Rosenberg, J. E., and Hommel Co., O., enamelware, (P.), B., 672.

and Langerman, A., integral expansion of vitreous enamels between the softening point and room temperature, B., 913.

Rosenberg, M., determination of indican in blood, A., III, 112. Rosenberg, M. A., and Avaliani, K. E.,

solution of vacuum films of metals in acids. II. Solution of iron and nickel in sulphuric acid, A., I, 88.

Avaliani, K. E., and Jurkovskaja, F. B., solution of "vacuum films" of metals in acids. I. Solution of chromium in sulphuric acid, A., I, 41. Rosenberg, S. L. See Kistiakowsky, G. B.

Rosenblad, C. F., plate heat exchanger for fluids, (P.), B., 3, 855.

Rosenblatt, M. B., blood of Alligator

mississippiensis, A., III, 2.

Rosenblit, S. M., and Papilov, L. J., work of the first Moscow stone-casting plant, B., 915.

Rosenblueth, A., and Cannon, W. B., adequacy of chemical theory of smooth muscle excitation, A., III, 258. See also Morison, R. S.

Rosenblum, C., formation of benzene in radiochemical polymerisation of acetylene, A., I, 472.

See also Paneth, F. A., and Perlinghi, (Mme.) S. L. T.

Rosenblum, D. See Glassmann, B. Rosenblum, I., [modified alkyd, oilsoluble] synthetic resins, (P.), B., 158.
[Oil-soluble] polyhydric alcohol-polybasic acid resin, (P.), B., 470. Oilsoluble phenol-aldehyde] synthetic resins, (P.), B., 1374.

Rosenblum, S., and Guillot, M., equidistant energy levels in nuclei of radioactive bodies, A., I, 160. Regularities in nuclear levels of radioactive atoms, A., I, 275. γ-Spectrum of Ra-B and Rd-Ac, A., I, 489.
Guillot, M., and Perey, (Mlle.) M.,

a[-ray] magnetic spectra in the actinium series, A., I, 160.

Rosenbohm, A., fission products of glutathione in living tissues and relation of glutathione to proteolytic degradation in the spread of cancerous swellings, A., III, 129.

Rosenbohm, E. See Jaeger, F. M. Rosendal, T., determination of vitamin-A, A., III, 43. Rosene, H. F., distribution of velocities of absorption of water in the onion root, A., III, 235.

Rosenfeld, A. H., dryage and deterioration

of sugar cane in Egypt, B., 275. Rosenfeld, B. See Weizmann, C.

Rosenfeld, L. M., preparation of grey powder [calcium acetate] in primitive plants, B., 904.

Rosengarth, F., and N.V. Maats. tot Beheer en Exploit. van Octrooien, heat-insulating tubes, (P.), B., 739.

Rosenheim, A. H., action of enzymes on antibodies, A., III, 85.

Rosenheim, M. L., mandelic acid in treatment of urinary infections, A., III, 59.

Rosenheim, O., and King, H., cholesterol and the adrenal cortical hormone, A., III, 360.

and Starling, W. W., action of selenium dioxide on sterols and bile acids. III. Cholesterol, A., II, 191. Rosenkevitsch, L. See Goloborodko, T.,

and Leipunski, A. I.
Rosenkranz, E. See Brand, K.
Rosenmann, M., fibrinolysis. VI. Relation of thrombolysin and thromboligin to blood coagulation, A., III, 196.

Rosenstein, L., formation of tetrathionate solutions, (P.), B., 908.

and Amer. Cyanamid Co., xanthates, (P.), B., 417.

and Hund, W. J., [cyclic] esters of dihydric and polyhydric alcohols, (P.), B., 218.

See also Shell Development Co.

Rosenthal, D. See Meunier, F. Rosenthal, H., [bakers'-]yeast food with alkaline bias, B., 278.

Rosenthal, H. G., polarographic determination of disulphide and thiol in biological substances, A., III, 410. Rosenthal, (Miss) J. E., vibrations of

asymmetrical collinear triatomic molecules, A., I, 398.

and Motz, L., application of a new mathematical method to vibration-rotation

interaction, A., I, 501.
and Murphy, G. M., group theory and vibrations of polyatomic molecules, A., I, 224.

Rosenthal, L., and Kamlet, J., alum-precipitated insulin, A., III, 438.

Rosenthal, O., morphological fatty degeneration, fat content, and metabolism of rat liver, A., III, 91. Intensity of succinate oxidation in surviving liver tissue, A., III, 471. Rosenthal, P. Sce Hettche, H. O.

Rosenthal, R., Lorch, A. E., and Hammett, L. P., kinetics of the quinhydrone electrode reaction, A., I, 626.

Rosenthal, S. M., effect of p-aminobenzenesulphonamide on organisms in vitro, A., III, 183.

Bauer, H., and Branham, S. E., chemotherapy. IV. Sulphonamide compounds in coccic infections, A., III, 301.

See also Branham, S. E.

Rosenthaler, L., microchemical contributions. XIV., A., I, 326. Detection of halogens (ohlorine, bromine) in organic compounds, A., II, 128. Detection of sulphur and nitrogen in organic compounds, A., II, 128. Detection of elements in organic substances, A., II, 358.

and Beck, G., composition of ashes of

drugs. II., B., 840.

Rosett, W., cuprous oxide photo-electric cell, (P.), B., 803.

and Bichowsky, F. R., recovery of lithium from its ores, (P.), B., 36. Separation of lithium salts, (P.), B., $13\bar{3}6.$

Roshanski, N. A., and Smirnova, E. I., action of short radio waves on enzymes, A., III, 392.

Roshdestvenski, D., periodic law viewed from the basis of spectral analysis, A., I, 391.

Roshdestvenski, M. S., and Broude, L. M., organic impurities in commercial bromine, B., 906.

Pukirev, A. G., and Maslova, M. S., preparation of pure pyridine from [coal-tar] pyridine bases, B., 1156.

Roshkov, V. M., Stepanenko, N. S., and Usova, K. M., cobalt salts as prophylactic and therapeutic antidotes in cyanide poisoning, A., III, 218.

See also Vinogradova, O. G.

Rosier, S. See Laneau, R. Rosin, P., influence of particle size in pro-

cesses of fuel technology, B., 1292. Kayser, H. G., and Rammler, E., mechanical separation of dust from gases, B., 508.

Rosin, S. See Siegel, S.

Roskosky, S. J. See Du Pont de Nemours & Co., E. I.

Rosliakova, E. N. See Pamfilov, A. V. Rosner, H. I., and Lowe Corp., J., sterilisation and drying of eggs, (P.), B.,

Rosner, L. See Bellows, J. Ross, A See Lindsay, L. M.

Ross, A. S. See Monk, R. H.

Ross, C. S., sphalerite from a pegmatite near Spruce Pine, N. Carolina, A., I,

Ross, D., regenerative furnace refractories, B., 1052.

Ross, D. M. See Hayes, F. R.

Ross, F. E., photographic photometry, B., 292.

Ross, H. E., homogenisation [of milk] as a preventive of oxidised flavour, B., 833.

Ross, H. K. See Vernon, A. A.

Ross, J. D. M., Morrison, T. J., and Johnstone, C., acid salts of monobasic organic acids. III., A., I, 298. See also Abbot, E. B.

Ross, J. F., effect of piperidinomethylbenzdioxan (933F) and yohimbine on action of certain drugs and ions on the nictitating membrane, A., Ill, 178.

Ross, P. A. See Kirkpatrick, P.

Ross, R. See Lava, V. G. Ross, S. See Clark, G. L.

Ross, W. E., and Fuson, R. C., action of magnesium methyl bromide on 2:4:6trichlorobenzoyl chloride, A., II, 422.

Ross, W. H., and Jacob, K. D., availability of calcined phosphate and other new phosphatic materials as determined by chemical and vegetative tests, B., 956.

See also Beeson, K. C., and White, L. M.Rossée, W. See Hilpert, R. S. Rosselot, G. A., influence of optical

excitation energy on transitions involving the 2^3P_0 level of mercury, A., I, 540. Rossem, A. van, chemical aspects of

vulcanisation, B., 160.

Rossi, A., oxidation of β -hydroxybutyric acid in the kidneys, A., III, 261.

and Giuffre, L., acetoacetic acid and the kidney, A., III, 174.

Rossi, B., and Boldrini, R., ionisation measurements on swarms produced in lead by cosmic radiation, A., I, 163.

See also Fedeli, F.

Rossi, G. See Nasinl, A. G., and Tocco, G. Rossi, G., and Scandellari, G., colloidal solution of oxy-dimercuriammonium iodide, A., I, 238.

Rossi, L., calcium content of human milk, as influenced by administration of calcium, irradiated ergosterol, and parathyroid hormone, A., III, 253.

Rossi, P., blood-urea in cattle with Aujeszky's disease, A., III, 171.

Rossichin, V. S. See Malinovski, A. E. Rossignoli, G. See Losana, L. Rossini, F. D., heat of hydrogenation of

ethylene, A., I, 138. and Knowlton, J. W., heats of combustion and formation of gaseous normal olefines, A., I, 619. Heats of combustion of ethylene and propylene, A., I, 619.

Rossmann, E., hexabromide determination [of linseed oil], B., 152. Composition, purpose, and properties of EL-varnish, B., 261. Rapid stand oil formation, B., 463. Determination of the number of double linkings in oil and resin [molecules], B., 463. New rust-preventive pigments, B., 466. Nature, properties, and results obtained with Teka oils, B., 586. Mechanical molecular interlocking as explanation of stand oil formation of fatty oils, B., 939. [Mechanical] methods for testing paint [and varnish, etc.], films, B., 945. and Bätz, K., "Firnagral" as binder for

putty, B., 466.
Rossner, W., derivatives of methylcholanthrene and heterocyclic derivatives of

cholesterol, A., II, 518. Rosson, M. M. See Standard Oil Development Co.

Rossouw, S. D. [with Wilken-Jorden], [determination of] cystine in wool, A., III, 119.

Rostagni, A., absorption of positive rays, A., I, 160. Ionisation by ionic impact. II., A., I, 209.

Rostás, E. See Western Electric Co.

Rostovski, E. N., and Scheremeteva, V., preparation of bornyl chloride, A., II, 253. See also Salkind, J. S.

Rostovtzeva, E., determination of nonnitrated hydrocarbons in technical nitrobenzene and its derivatives, B., 324. Determination of picric acid in picramic acid, B., 415.

Rostovzeva, K. See Korolev, A. Rotbart, I. M., and Kolesnikov, D. H., preparation of saligenin, B., 839.

Rotblat, J., absorption of γ -rays measured by their photo-effect in beryllium, A., I, 388. Artificial radioactivity produced by fast neutrons and their inelastic collisions, A., I, 439.
Rotermund, M. A. See Union Carbide &

Carbon Corp., and Union Carbide &

Carbon Res. Labs. Roters, H. See Raub, E.

Roth, A. See Möller, H. Roth, H., pressure regulator for carbon and hydrogen determination, A., II, 222. Microdetermination of rubidium and cæsium in organic compounds, A., II, 268. Determination of nitrogen in diazo-compounds, A., II, 268. Microelementary analysis of organic boron compounds, A., II, 359. Roth, H. D., and Burlage, H. M., Chrysopsis graminifolia, Nutt, A., III, 330. Roth, K. See Mannich, C.

Roth, M. W., making invisible spot-welds. B., 1352.

Roth, R. T. See Niederl, J. B.

Roth, W., stress-distribution figures in magnesium-aluminium forging alloys, B., 577.

Roth, W. A., heats of combustion of substances containing sulphur and halogens, A., I, 364. Modern thermochemistry and its scientific and technical importance, A., I, 618.

and Becker, G., succinic acid as a secondary standard for calibration of combus-

tion bombs, A., I, 534.

and Bertram, A., heats of solution of hydrogen chloride and bromide, A., I, 413. Recalculation of heat effects, A., I, 518.

and Börger, E., thermochemistry of boron. I., A., I, 186

Börger, E., and Bertram, A., thermochemistry of boron. II., A., I, 364.

Pahlke, H., Bertram, A., and Börger, E., physical chemistry of hydrofluoric acid, A., I, 362.

See also Bertram, A.

Roth Rubber Co. See Flemming, C. F. Rothberg, P., Flexser, L. A., and Montrose Chem. Co., ammonium salts of acetyl-

salicylic acid, (P.), B., 1135. Rothberger, C.J. See Goldenburg, M.Rothe, E., and Kopcewicz, T., comparison of radioactivity of Alsace rocks by the

tube counter method, A., I, 587. Rothe, G. See Bredereck, H.

Rothe, H. See Kleen, W. Rothen, A. See Levene, P. A.

Rothenbach, E, and Silbereisen, K., mechanical examination of malt, B.,

Rothermundt, M. See Burschkies, K. Rothlin, E., standardisation of ergot, B., 286.

Rothrock, D. A., jun., and Kraus, C. A., properties of electrolytic solutions. XX. F.p. of solutions of electrolytes in benzene, A., I, 563.

Rothrock, H. S. See Du Pont de Nemours & Co., E. I.

Rothschild, R. B., jun., concrete in counterweight made heavy by magnetite, B., 1344.

Rothstein, E., influence of poles and polar linkings on tautomerism in the simple three-carbon system. IV. Activation by sulphonyl groups. V. Course of prototropic change in bis-sulphonylpropenes. A., II, 132.

Rothstein, J. · See Scoles, D. L.

Rotini, O. T., Dammann, E., and Nord, F. F., mechanism of enzyme action. XIV. Dehydrogenation by Fusarium lini, Bolley, A., III, 66.

Rotter, H., experimental modification of the velocity of absorption. I. Inhibition of absorption of subcutaneously injected poisons by substances of the adrenaline scries, A., III, 27. Determination of vitamin-C in the living organism, A., III, 282.
Rotter, W. See Picado, C.
Rottner, E., air conditions in refrigerated

enclosures, B., 1142.

Rotzeig, R., and Fuchs, N., ultramicroscopic estimation of the size of aerosol particles, A., I, 131. See also Fuchs, N.

Rouard, P., optical properties of thin metallic films, A., I, 228.

Roubaud-Valette, J., relations between polarisation of a photon and spins of the constituent corpuscles, A., I, 215. Equations of the photon, A., I, 215.

Rouchdi, M. See Ramon, G. Rouchelman, N., new black-pigmented species of Torula, A., III, 143, 395. Rouette, H. See Brauckmeyer, R.

Roughton, F. J. W. [with Adair, G. S., Barcroft, J., Goldschmidt, Stefan, Herkel, W., Hill, R. M., Keys, A., and Ray, G. B.], thermochemistry of the oxygen-hemo-globin reaction. II. Comparison of heat as measured directly on purified hæmoglobin with that calculated indirectly by the van 't Hoff isochore, A., III, 2.

Rougichitch, O. S., and Dumitrescu, E., oxidase reaction of human milk, A.,

III, 9.

Rouillard, (Mlle.) C. See Geloso, M. Roulleau, J., barrier layers and the Becquerel effect, A., I, 346. Influence of luminous intensity on sensitivity of photo-electric counters, A., I, 379. Influence of contact resistance on the rectifying and photo-electric properties of barrier-layer cells, A., I, 600.

Roulleau, M., use of phosphorescent materials in airship navigation; apparatus for measuring very small light intensities,

A., I, 49.

Rounsavell, O. N. See Caughlan, W. M. Rounsfell, E. O., milk-bottle cleaning, B.,

Rouppert, S., effect of magnetic field on the absorption of selenium, A., I, 486. Roure, R., Quevron, L., and Gense, R.,

photo-electric comparator, A., I, 535. Rourke, R. K., and Johns-Manville Corp., air classification, (P.), B., 995.

Rouse, A. G., scattering of potassium ions

by mercury vapour, A., I, 160. Roush, R. W., continuous gas carburising of automotive [steel] ring gears, B., 1351.

Rouslacroix, A., Boyer, L., and Gastinel, R., effect of antiseptics on course of the Bordet-Wassermann reaction, A., III, 249. Preservation of blood for the Bordet-Wassermann reaction with 8-hydroxyquinolino sulphate, A., III, 249.

Rousseau, A., instantaneous indication of presence of juice in returned boiler feedwaters [in beet-sugar factories], B., 380.

Roussel, G. Sce Gruzewska, Z.

Rousselot, L. M., and Bauman, L., experimental production of cholesterosis of the gall bladder: cholesterol absorptive properties of the gall bladder wall, A., III, 211.

Rousset, A., depolarisation factor of the

light diffused by argon, A., I, 485.
Routala, O., Linkola, K., and Pölkkynen,
O., quality of sulphite-cellulose from fast- and slow-growing pines, B., 423. and Vauhkonen, T., carbon dioxide formation on boiling cellular matter with sulphite, A., II, 229.

Rouvé, A. See Stoll, M. Roux, E. R., combustible soil from the Witwatersrand, B., 1248.

Rouyer, E. See Bourion, F. Rouzaut, P., detection of rancidity in fats and oils, B., 1077.

Rovida, E., method of the Italian Pharmacoposia of determining peptic activity, A., III, 482.

See also De Caro, L.

Rowaan, P. A., essential oil from leaf of the Padang cinnamon tree, B., 187. Rotenone determinations in derris root, B., 1267.

and Duuren, A. J. van, determination of essential oils in materials, B., 1134.

Rowalt, E. M., soil defence in the Piedmont, B., 594.

Rowden, E., heat balance and performance of a muffle tunnel kiln fired by town gas, B., 139.

and Green, A. T., effect of hydrocarbon gases on refractory materials. II. Effect of methane on refractory materials. III. Effect of coal gas on refractory materials, B., 138. Problems of smoke emission in the clay industry, with particular reference to the heavy clay industries, B., 549.

Rowden, W. F., Hurst, J. E., and Bradley & Foster, Ltd., chilled and grain rolls,

(P.), B., 1225.

Rowe, A. F., plastic composition and method of compounding it, (P.), B., 1239. Rowe, E. A., heart rot of young sugar beet plants grown in culture solutions,

A., III, 50. Rowe, F. M., Adams, D. A. W., Peters, A. T., and Gillam, E. A., reaction of certain diazosulphonates derived from β -naphthol-1-sulphonic acid. Conversion of nitro-3-aryl- and nitro-3-aryl-4-methyl-phthalaz-1-ones into corresponding phthalaz-4-ones by migration of the nitroaryl group, and

related reactions, A., II, II9. and Chamberlain, K. A. J., "fading" of dyeings on cellulose acetate rayon; action of "burnt gas fumes" (oxides of nitrogen, etc., in the atmosphere) on celluloso acetate rayon dyes, B., I040.

and Twitehett, H. J., reaction of certain diazosulphonates derived from β -naphthol-1-sulphonic acid. XVI. Constitution and reactions of I-methoxy-3-(4'- and 3'-nitroaryl)-4-methylene-3:4-dihydrophthalazines, A., II, 35.

Rowe, J. W. See Rubber Producers Res. Assoc.

Rowe, L. W., stability of ergot, B., 841. and Pfeifle, H. W., stability of digitalis potency in drugs, B., 86.

and Simond, A. E., relationship between rat and mouse units of estrogenic activity, A., III, 321.

See also Gruhzit, O. M.

Rowe, R. D. See Leighton, P. A.

Rowe, S. C., and Bonney, V. B., chemical and physical methods for determining maturity of canned snap (stringless) beans, B., 282.

See also Bonney, V. B.

Rowell, R. H., Sanderson, T., and Sanderson, D. H., drying, primarily intended for artificially drying green fodder crops, grain, and other loose materials of a vegetable nature, (P.), B., 727.

Rowinski, P. See Margaria, R. Rowland, J. M. See Osborne, S. G.

Rowland, S. J., heat-denaturation of milkalbumin and -globulin, A., III, 201. Soluble protein fraction of milk, B., 488. Creaming power of heated milk as influenced by denaturation of albumin and globulin, B., 970.

Rowland, W., and Atmospheric Nitrogen Corp., storage and recovery of soluble

materials, (P.), B., 632.

Rowlands, I. W., species variation in thyrotropic activity of the pituitary gland, A., III, 360. Assay of lactogenic extracts of anterior pituitary gland, A., III, 40I.

and Parkes, A. S., inhibition of the gonadotropic activity of human pituitary by antiserum, A., III, 278.

and Singer, E., gonadotropic activity of pituitaries of vitamin-E-deficient rats, A., III, 156.

Rowlands, R. E., and Brit. Acoustic Films, sound-absorbing surfaces and structures, (P.), B., 350.

Rowles, A. H., and Barron & Son, W. S., drying and conditioning of cereals and other substances, (P.), B., 509, 629.

Rowley, H. H., physical studies of nonaqueous solvates. II. Vapour pressure of magnesium bromide-dicthyl ether solutions, A., I, 308.

Rowley, H. J., high-yield sulphite [pulp] for newsprint, B., 425.

Rowley, R. J. See Churchill, H. V.

Rowntree, L. G., Clark, J. H., Steinberg, A., and Hanson, A. M., biological effects of pineal extract (Hanson), A., III, 41.

Clark, J. H., Steinberg, A., Hanson, A. M., Einhorn, N. H., and Shannon, W. A., thymus and pineal glands, A., III, 280.

Lansbury, J., and Steinberg, A., neoplasms in rats resulting from the feeding of crude wheat-germ oil made by ether extraction, A., III, 299.

Rowntree & Co. See Todd, J. W. Roxalin Flexible Lacquer Co., Inc., lacquers,

(P.), B., 370.

Roxburgh, H. L. See Melville, H. W. Roy, A. C. See Bose, P. K., and Chopra, R. N.

Roy, A. N. See Chakraborty, R. K.
Roy, B. C., and Chatterjee, D. W., treatment of myopathies with amino-acids, A., III, 14.

Roy, G. C. See Sil, K. M.

Roy, (Mme.) M. See Achard, C., and Boutaric, A.

Roy, M. B. See Chakravarti, S. N. Roy, M. F. See Buswell, A. M.

Roy, S. N., use of adsorption indicators in acidimetry and alkalimetry, A., I, 374.

Royal Baking Powder Co. See Lund, A. A. Royce, H. D., and Southern Cotton Oil Co., edible fatty esters of synthetic origin, (P.), B., 978.

Royce, S., hydrothermal leaching of iron ores, A., I, 538.

Royds, T., and Narayan, A. L., density of calcium and hydrogen at different levels in the sun, A., I, 105. Oxygen in solar prominences, A., I, 381.

Royen, H. J. van, [steel for] wheel rim, (P.), B., 248.

Royen, P., constitution of solid phosphorus hydride, A., I, 94.

Royer, L., thermoluminescence of crystallophyllian and eruptive rocks from Algeria, A., I, 333, 382.

Royer, M., loss of bilirubin introduced into the intestine, A., III, IO. Variations in blood- and bile-bilirubin of intestinal origin, A., III, 10.

and Speroni, A., reciprocal influence of urobilin and bilirubin of the blood on their biliary elimination, A., III, 10.

Royles, Ltd., and Hills, B. M., filters, (P.), B., 304.

Royster, P. H., Clark, K. G., Hignett, T. P., Bowe, L. E., Lansdon, H. I., Southard, J. C., and Turrentine, J. W., blastfurnace processes for the production of phosphatic and potassic fertiliser materials, B., 955, 1250.

Royt, L. E. See Hudson, C. M.
Rozanova, V. See under Rosanova, V.
Rozeboom, L. E., relation of bacteria and bacterial filtrates to development of mosquito larvæ, B., 849.

Rozenberger, N. A., and Laube, A. G., bleaching of sulphate cellulose, B.,

1036.

Rozenfeld, A. A. See Uschakov, S. N. Rozenfeld, L. E., and Schesterikova, T. P. hormones and enzymes. I. Influence of certain hormones on amylase, A., III, 30.

Rozengart, V. I., influence of training on adenosine triphosphate content of rabbit, pigeon, and chicken muscle, A., III, 421. Rozental, D., stoicheiometry. II. Vari-

ation in volume of organic substances on fusion, A., I, 12. Rozler, V. B., reworking of phosphates with

nitric acid, B., 132.

Rozov, V. N. See Pletenev, S. A. Rozova, Z. S. See Tschilikin, M. M.

Rozovska, E. S., effect of metabolic changes (oxidative processes) on rate of oxidation of alcohol in the organism, A., III. 20.

and Tscherkes, A. I., sensitivity of tho organisms to drugs in acid and alkaline

conditions, A., III, 424.

Rshechin, V. P. See Pogonkina, N. I. Ruark, A. E., and Brammer, F. E., efficiency of counters and counter circuits, A., I, 582. See also Devol, L.

Rubanik, M., Zabolotzki, T. V., and Rusov, M. T., ferromolybdenum catalysts of ammonia synthesis, B., 901. See also Finkelstein, V

Rubaschkin, S. E., and Gutman, S. M., application of the mercury cathode to determination of aluminium [in steels], B., 564.

Rubber Producers Research Association, Farmer, E. H., Stevens, H. P., and Rowe, J. W., treatment of rubber, (P.), B., 1379.

Stevens, H. P., and Dyer, J. W. W., apparatus for purifying rubber latex and similar dispersions, (P.), B., 161. Purification of rubber, (P.), B., 703.

Stevens, H. P., and Popham, F. J. W., rubber derivatives, (P.), B., 474. Oxidation products of rubber, (P.),

B., 474.

Rubber Service Laboratories, antioxidants and treatment of rubber therewith, (P.), B., 266. Production and use of vulcanisation accelerators, (P.), B., 1246.

See also Evans, S. M., and Scott, W. Rubel, W. M., and Belitzer, V. A., glycolysis activator from normal and tumour tissues, A., III, 12.

Ruben, H., and Salomonski, M., [treatment] of cigarette [wrappers], (P.), B., 1409. Ruben, S., and Libby, W. F., width of

iodino resonance neutron band, A., I. 340.

and Ruben Condenser Co., electrolytic condenser, (P.), B., 1074. and Ruben Rectifier Corp.,

electric current rectifier, (P.), B., 361. See also Libby, W. F., and McMillan, E.

Ruben Condenser Co. See Ruben, S.

Ruben Rectifier Corporation. See Ruben, S. Rubenkoenig, H. L. See Mantell, C. L. Rubens-Duval, A. See Villaret, M.

Rubenstein, L. See Imperial Chem. Industries.

Rubentschik, L., and Chait, S. S., vitality of bacteria, A., III, 224.

Roisin, M. B., and Bieliansky, F. M., adsorption of bacteria in salt lakes, A., III, 224.

Rubin, B. A., ratio of synthetic to hydrolytic action of invertase as a characteristic value for different varieties of onions, A., III, 141. and Lutikova, O. T., biological rôle of

enzymes in plants. I. Action of invertase as a factor in sugar storage, A., III, 239.

Sisakjan, N. M., and Lutikova, O. T., measurement of oxidising-reducing power of living vegetable tissue, A., III, 407.

and Stratschitski, K. I., biological rôle of vitamin-C in the plant, A., III, 154. See also Stratschitski, K. I.

Rubin, L. C. See Riblett, E. W.

Rubin, M. A., and Syrocki, B. J., mechanism of adaptation of free ending factile receptors in frog skin, A., III, 474.

Rubin, M. M., occurrence, reduction, and recovery of manufacturing wastes [in the pulp and paper industry], B., 333. Rubin, N., and McNabb, W. M., deter-

mination of phosphorus in silver phosphate, A., I, 198.

Rubin, S. H., Present, C. H., and Ralli, E. P., liver-lipins in normal dogs on

different types of fat, with and without added lecithin, A., III, 455.

Rubin, T. R. See Gucker, F. T., jun. Rubina, T. See Kozlov, N.
Rubino, M. C., lack of mineral salts,

especially phosphoric acid, in soils, B., 604.

Rubinstein, A. M., pyridine complexes of quadrivalent platinum derivatives, A., II, 74. Chemical composition of Fergana benzine, B., 750.

and Gratscheva, E. P., simultaneous dehydrogenation and dehydration of alcohol by single and mixed catalysts, A., I, 252.

and Kronrod, A. J., action of carbon dioxide in vapour-phase oxidation of alcohol at metallic catalysts, A., II, 317.

and Lukaschina, N. F., catalytic oxidation of organic compounds by carbon dioxide. II. Oxidation of different alcohols, A., II, 270. and Nagiev, N. M., catalytic oxidation of

organic compounds by carbon dioxide. III. Mechanism of oxidation of alcohols, A., II, 270.

Preobrashenskaja, K. P., and Tschernomorskaja, L. S., catalytic oxidation of organic compounds by carbon di-oxide. I. Oxidation of isoamyl alcohol in presence of oxide and salt

catalysts, A., II, 270.

Rubinstein, D. L., and Miskinova, T., one-way permeability. I. Is frog skin permeable to water in one direction only? A., III, 132.

Rubinstein, P. L. See Kritschevski, I. L. Rubinstein, R. N. See Mikulinski, A. S.

Ruble, R. W. See Bartlett, J. B. Ruchelman, A. A., urease. VII. Effect on urease of certain elements of the 2nd, 4th, 5th, and 7th groups of the periodic system, A., III, 312.

Ruchhoit, C. C. See Butterfield, C. T. Ruckelman, A. A., and Guberman, E. I. biological determination of heavy metals in food products, B., 837.

Ruckert, H. See Herzog, A. Ruckman, N. E. See Sherwood, T. K. Rudakov, G. A., and Korotov, S. J., vapour pressure of certain terpenes, A., I, 294. Vapour-liquid equilibria of certain binary mixtures of terpenes, A., I, 296.

Rudberg, N. See Kalling, B.

Rudd, H. W., bituminous finishes, B., 590. Ruddy, M. V. See Fardon, J. C. Rudenko, E. I., and Nikolaev, V. I.,

adsorptive properties of colloidal ferric

oxido, A., I, 209.
Rudenko, M. G. See Nametkin, S. S.
Rudenko, N. S., and Schubnikov, L. V., viscosity of liquified gases, A., I, 125.

Ruderman, bacteriological control of catgut, B., 1319.

Rudge, E. A., decomposition of timber under industrial conditions. IX. Laundry washing machines, B., 40.

Rudkovski, D. M., Schevtzova, G., and Pemeller, G., catalytic polymerisation of industrial unsaturated hydrocarbon gases under pressure, B., 1005.

See also Frost, A. V.
Rudneva, (MUe.) F. J. See Favorski, A. E.
Rudnick, P., spectra line intensities in
O- and B-type stars, A., I, 105.

Rudnitski, A. A. See Nemilov, V. A.

Rudoff, H. Seo Allen, C. F. H. Rudolf, N. See Ellis, E. H.

Rudolfs, W., stream pollution in New Jersey; importance of industrial waste, B., 93. Effect of trade wastes on high- and low-temperaturo [sewagesludge] digestion, B., 1138.

and Gehm, H. W., chemical coagulation of sewage. VI.—VIII., B., 734, 985,

1413.

and Ingols, R. S., chemical coagulation of sewage. VII. Effect of garbage, B., 1138.

and Setter, L. R., high- and low-temperature [sewage-sludge] digestion experiments. III. Effect of certain organic wastes, B., 1413. See also Faber, H. A.

Rudolph, H., chemistry in service of national economy in raw materials; filtration media, B., 988.

Rudolph, L. See McFarlane, W. D. Rudorf, W., plant-breeding research and

oil seed cultivation, B., 957. Rudorfer, H. See Breitenbach, J. W.,

and Suess, H.

Rudow, H. See Weyl, W. Rudra, M. N., vitamin-C. II. Vitamin-C contents of the liver and muscle of some Indian fresh-water fish, A., III, 189.

See also Bagchi, K. N.

Rudy, H., recent advances in immunochemistry, A., III, 118. See also Kuhn, R.

Rue, J. D., developments in improving quality of chemical wood pulps, B., 426.

Bleaching kraft [pulp], B., 426. Rueckel, W. C., testing insulating re-fractories, B., 1206.

Rückert, H. See Herzog, A., and Koch,

Ruedy, J. E., and Sabine, G. B., evaporated aluminium coatings for interferometer plates for use in the ultra-violet, A., I, 634.

Ruedy, R., coefficient of heat transfer for vertical surfaces in still air, B., 1142.

Ruegg, F. See Bauer, B.
Rühl, A., and Lin, P., carbon monoxide intoxication in heavy smokers, A., III,

Ruehle, A. E. See Cline, J. K., and Williams, Robert R.

Rüland, L. J., occurrence of gas in bitu-

minous coal mines, B., 858. Rueman, M., compression of methane by

the cascade process, B., 867. and Fedoritenko, A., application of i-xdiagrams to separation of helium from nitrogen, B., 906.

Ruemele, T., swelling of flour, B., 608. Rütgerswerke Akt.-Ges., preservation of timber, (P.), B., 42.

Rüttenauer, A., excitation of phosphors in the neon discharge tube, A., I, 63. See also Gen. Electric Co., and Krefft, H. Ruff, G. See Modern, F.

Ruff, O., and Geselle, P., behaviour of bituminous coal in taking up and giving

up carbon dioxide, B., 403.

Ruff, V. T., charcoal method of desulphuration of gases, (P.), B., 37. Adsorption of nitrous oxides by activated carbon, B., 542.

Ruff, W., running quality of liquid malleable iron and steel, B., 558. Determination of the flowing properties of liquid metals, B., 1211.

See also Schwartz, H. A.

Rufimski, P., purification of rosin, B., 60. Raising the m.p. of resin, B., 368. Ruge, U. See Langenbeck, W.

Ruggles, A. C. See Eastman Kodak Co. Ruggli, P., substantive dyes and the theory

of substantivity, B., 121.

Caspar, E., and Hegedüs, B., heterocyclic containing nitrogen. compounds 2-phenyl-XXVII. Preparation of isatogen and 6-carbethoxy-2-phenylisatogen, A., II, 208.

and Grand, R., heterocyclic compounds containing nitrogen. XXIX. Derivatives of m- and p-phenylenediamine and of 6-amino-oxindole, A., II, 262.

and Hindermann, P., heterocyclic compounds containing nitrogen. XXVIII. 4:6-Dinitro- and diamino-isophthal-

aldehyde, A., II, 214. and Müller, Wilhelm, heterocyclic compounds containing nitrogen. XXVI. Preparation of o-aminated p-phenylenedicthylamines (p-di-β-aminoethylbenzenes), A., II, 186.

and Reichwein, H., heterocyclic compounds containing nitrogen. XXX. 4:6-Diamino-1:3-diacetylbenzene and its transformation into derivatives of lin.-benzodipyridine. XXXI. Synthesis of indigotin from o-substituted acetophenones, A., II, 521, 522.

and Staub, A., cis-trans-isomeric stilbenes. III. Stereochemistry of R. Pschorr's phenanthrene synthesis, A., II, 58. Heterocyclic compounds containing nitrogen. XXXII. Benzodipyridine derivatives. IV. XXXIII. Hydrogenation of o-phenylenediacetonitrile under high pressure, A., II, 517, 522.

and Staub, A. [with Schmid, O.], cistrans-isomeric stilbenes. IV. Stereoisomeric o-nitro- and o-amino-stilbenes, o-amino-dibenzyl, and ring-closure to phenanthrene and dihydrophenanthrene. II., A., II, 96.

Rugh, R., ovulation induced out of season, A., III, 360.

Rugosa, M. See Fuller, J. E.

Ruhemann, (Mme.) B., X-ray investigations with manganous oxide, A., I, 118.

Ruhemann, M., equilibrium curves of low-

melting mixtures, A., I, 137. Ruhkopf, H., derivatives of cyclotetramethylencpyrazole and their molecular compounds with substituted barbituric acids, A., II, 307. [Derivatives of cyclotetramethylenepyrrolc and their molecular compounds with substituted barbituric acids], A., II, 429.

See also Micheel, F.

Ruhl, O., liquid fuel problems in Germany, B., 641.

Ruhoff, J. R., and Reid, E. E., aliphatic

dimethylamides, A., II, 139.

Ruhrchemie Akt.-Ges., converting metallic aluminium with hydrogen chloride [into aluminium chloride for organic syntheses], (P.), B., 238. Apparatus for catalytic treatment, more particularly purification of gases, (P.), B., 309. Thermal conversion of hydrocarbons into valuable products, (P.), B., 411. Lubricating oils, (P.), B., 645. Production of acetylene by heating hydrocarbon gases for a short time, (P.), B., 647. Rendering commercially useful the gasol and ethylene contained in industrial gases, (P.), B., 755. Washing of industrial gases such as coal gas, (P.), B., 1009. Apparatus for thermal conversion of hydrocarbons into valuable products, (P.), B., 1011. Production of antidetonating fuels by heat treatment of hydrocarbon mixtures, (P.), B., 1014. Production of hydrocarbons by the catalytic reduction of oxides of carbon with hydrogen, (P.), B., 1309.

See also Mannesmannröhren-Werke. Ruibak, B., and Alfimova, E., preparation

of naphthenic acids, B., 20. Ruiz, A. S. See Giroud, A.

Ruiz, C. L., bituminous products; their

constitution and analysis, B., 10. Rule, C. K., and La Mer, V. K., thermal type silver-silver chloride electrodes,

Rule, H. G., and Chambers, A. R., solvent action. XIII. Optical rotatory power and refractive index of the medium, A., I, 115.

and Crawford, James, solvent action. XII. Optical rotatory powers of lbenzoin and l-benzoin methyl ether in

solution, A., I, 115. and Smith, F. R., synthesis of mesobenzanthrones and anthanthrones by the Ullmann method, A., II, 424.

See also Grieve, J. L., and Ludlam,

Rule, J., and Holman Bros., apparatus for testing the hardness of materials, (P.), B., 935.

Rulon, O., differential reduction of Janusgreen during development of the chick, A., III, 16.

Rumbaugh, L. H., and Hafstad, L. R., disintegration experiments on the separated isotopes of lithium, A., I, 5.

Roberts, R. B., and Hafstad, L. R., conservation of energy in disintegration of ⁸Li, A., I, 438.

Rumbel, S. W. See Brizzolara, A. A. Rumeau, G., optical antipodes and velocities of crystallisation, A., I, 13.

Rumer, G., γ -radiation arising from positron destruction, A., I, 108. Protonneutron conversion under the influence of y-rays, A., I, 341.

See also Landau, L. Rumer, J. B., plain atomic and molecular models in quantum chemistry, A., I,

Rumford Chemical Works. See Fiske, A. H.

Rummel, J. K., and Babcock & Wilcox Co., fluid-treating device, (P.), B., 739. Rummel, K., and Kessler, F., simplified calculation of recuperators, B., 444.

Rummelsberg, A. L. See Hercules Powder Co.

Rumpf, P., synthesis of aliphatic aminosulphonic acids; electrochemical study, A., II, 234.

Runnström, A. See Runnström, J. Runnström, J., acid formation in frozen and thawed Arbacia punctulata eggs: its bearing on the problem of activation; influence of iodoacetate on activation and development of tho eggs, A., III, 423.

and Alm, F., inhibition by iodoacetate of fermentation by dried yeast, A.,

III, 143.

and Hemberg, T., annulment of fluoride inhibition in living top yeast by adenylic acid, A., III, 143.

Runnström, A., and Sperber, E., influence of respiration on permeability of the yeast cell to fluoride, A., III, 355. Effect of cysteine on respiration and fermentation of bakers' yeast, A., III, 395.

Runtzo, A. P. See Nikiforov, V. K. Rupe, H., derivatives of the 1:2:3:4-tetrahydroquinoline series, (P.), B., 1179. and Bohny, P., isomeric 2:3-diamino-

camphanes, A., II. 68.

and Di Viganno, A. T., constitution and synthesis of isodicamphenepyrazine, A., II, 508. Action of primary aliphatic bases on camphorquinone. II., A., II, 508.

Paltzer, R., and Engel, K. [with Gassmann, A., and Bidder, H. von], catalytic hydrogenation of 2-cyano-1benzoyl - 1:2 - dihydroquinoline (Reissert's compound). I., A., II, 210.

See also Steiger, H. Rupert, F. F. See Meller, H. B.

Rupp, E., and Bailey, C. H., effects of protease increments on plasticity of doughs, B., 1119.

Rupp, E. M. See Kent, G. G. Ruppel, E. Sco Kostron, H. Ruppert, W. See Sauer, E.

Ruppol, E., ultra-violet absorption spectra of maleonitrile, A., I, 111. Chemical constitution of "cerebrin" of beer yeast,

A., III, 484. Ruppolt, W. See Jander, G.

Ruprecht, R., testing of sheets of synthetic resin, B., 1237.

Rusanevitsch, N. F., analysis of nonmetallic inclusions in welded joints, B.,

Rusanov, A. K., quantitative flame spectral analysis of solutions, A., I, 46. Microdrilling machine for separation of

inclusions in section, A., I, 50.
and Kostrikin, V. M., spectroscopic determination of germanium and beryllium in minerals and ores, A., I,

Rusby, G. L. See Robertson, A.

Rusch, V. A., and Dvinjaninova, I., improvement of vegetable oils by conjugated hydrogenation, B., 938.

Ruschmann, W. See Wiberg, E. Ruschbrooke, G. S. See Fowler, R. H.

Rushton, E. See Hartshorn, L. Rushton, F. See Brayshaw, S. N., and

Brayshaw Furnaces & Tools.

Rushton, J. H., countercurrent liquid—liquid extraction in a packed tower; solvent extractions of [lubricating] oil by nitrobenzene, B., 736.

Rusinov, L. I., passage of fast neutrons through beryllium, A., I, 162.

and Latischev, G. D., activity of substances on bombardment by slow neutrons, A., I, 107.

and Sagaidak, A. N., nuclear photo-effect in beryllium, A., I, 162.

Rusk, H. P., and Snapp, R. R., toasting soya-bean oil meal lowers palatability, B., 1403.

Ruska, J., Hermann Kopp, historian of chemistry, A., I, 269.

Ruskin, F. R. See Ruskin, S. L.

Ruskin, S. L., and Ruskin, F. R., compounds of metalloids with nucleotides and their decomposition products, (P.), B., 1272.

Rusov, M. T. See Rubanik, M.

Ruspini, A., true acidity of Argentine wines, B., 278. Crude fibre in tobacco, B., 728. Russ, H. See Keller, G.

Russ, L., electric induction furnaces, (P.), B., 55.

Russell, A., and Todd, J., constitution of tannins. V. Synthesis of some flav-pinacols, A., II, 206.

Russell, D., paper, (P.), B., 230.

Russell, D. S., and Barrie, H. J., storage of cystine in the reticulo-endothelial system and its association with chronic nephritis and renal rickets, A., III, 15. See also Northfield, D. W. C.

Russell, E. E., rancidity as a problem in

oils and fats, B., 153.

Russell, (Sir) E. J., soils and fertilisers, B.,

Russell, F. J., affording protection within living spaces against poisonous gases in the external atmosphere, (P.), B., 986. Russell, H. D. See Kodak, Ltd.

Russell, H. N., King, R. B., and Lang, R. J., third spectrum of cerium (Ce III), A., I,

Russell, H. W., resistance to damage by overstress of precipitation-hardened copper steel and copper-malleable [iron], B., 143.

Russell, J. A., and Bennett, L. L., carbohydrate storage and maintenance in the hypophysectomised rat, A., III, 401.

See also Fisher, R. E.

Russell, J.J., Beamish, F.E., and Seath, J.determination of osmium in a lead assay button, B., 1355.

See also Beamish, F. E.

Russell, J. K., Maass, O., and Campbell, W. B., sorption of water and alcohol vapours by cellulose, B., 656. Russell, J. T., use of anhydrous ammonia

to inhibit gas hydrate formation [in

natural gas], B., 867. Russell, L. S. See Fraser, F. J. Russell, M. A., effect of X-rays on Zea

mais, A., III, 234.
Russell, N. M. See Hubbard, R. S.
Russell, P. R., essentials of good pickling

practice [for iron and steel], B., 1061.

Russell, R. H., and Gas Fuel Corp., burning of emulsified compounds, (P.), B., 115. Compound including hydrocarbon, (P.), B., 1304. Gas from emulsified mixtures, (P.), B., 1304.

Russell, R. J. See Hardinge, H. Russell, R. S., influence of impurities on properties of lead. IV. Effects of antimony on rate of recrystallisation of distorted lead. V. Creep tests on electrolytic lead and some of its alloys, B., 144.

Russell, W. C., assay of vitamin-D in milk; duration of the assay period, B.,

971.

and Taylor, M.W., vitamin-A in eggs and food, B., 491.
Russell, W. E., determination of the oil-

fog content of [town's] gas, B., 746.

Russell, W. W., and Marks, M. E., determination of oxygen in organic compounds containing sulphur; Ter Meulen method, A., II, 40.

Russina, H., strength and extensibility of

artificial silks, B., 534.

Russo, A., nature, changes in size, and reversibility of chondriosomes, A., III, 57.

Russo, F. See Giacalone, A. Russo, M. See Dowzard, E.

Rust Proofing Co. of Canada, Ltd., cleaning and coating of metal surfaces, (P.), B., 1072, 1228. Coating of metal articles, (P.), B., 1228.

Rustad, S. See Frivold, O. E.

Rustamov, A. See Sementschenko, V. K. Rustless Iron Corporation of America. See Arness, W. B.

Rustless Iron & Steel Corporation of

America. See Feild, A.L.

Ruszek, H.H., influence of water and added substances and of p_H [of the substrate] on growth of fungal cultures, A., III, 223.

Rusznyák, S. See Bentsáth, A.

Rutberg, R. See Kovalski, V. V.
Rutenber, C. B., and Andrews, J. C.,
applicability of Benedict-Denis procedure to determination of methioninesulphur, A., II, 478.

Rutgers, A. J., application of thermodynamics to superconductivity, A.,

I, 19. and Wouthnysen, S. A., application of thermodynamics to "phase changes" extending over a finite temperature range, A., I, 242, 405.
Ruth, G. Sec Kayser, H.
Ruth, W. A. See Kadow, K. J.

mass 3, A., I, 542.

Ruth Akt.-Ges., G., chemically-resistant oil-colour paints, (P.), B., 263.

Ruthen, A. See Levene, P. A. Rutherford, (Lord), transmutation of heavy elements, A., I, 389. Search for the isotopes of hydrogen and helium of

Rutherford, H. See Harris, M. Rutherford, M. B. See Daniel, E. P.

Ruthruff, R. F. See Standard Oil Co., and Standard Oil Co. of Indiana.

Rutle, J. See Vogt, F. Rutovski, B., and Gorbunova, A., application of dichloroethane to concentration of acetic acid, B., 1308.

Rutt, A. H., dyeing of paper, B., 27. Ruttle, M. L. See Nebel, B. R.

Ruttmann, W. See Mailänder, R. Ruttner, F., significance of microchemistry for limnological investigations, A., III, Ruxburgh, J., iron castings for steel works, B., 1348.

Ruyer, A. See Bedos, P.

Ruys, A. H. See Dijck, W. J. D. van. Ruys, J. D. See Bataafsche Petroleum Maats., and Shell Development Co.

Ruyssen, R., and Verstraete, E. O. K., properties of the saponin sol, A., I, 615. Ruzicka, J., equipment for routine creep tests on zinc and zinc-base alloys, and an

example of its application, B., 795.

Ruzicka, L., carbon rings. XXIX. Density curves of cyclic diketones, A., I, 175. Structure of triterpenes, A., II, 109. [Artemisia ketone], A., II, 177.

and Bosshard, W., sex hormones. Preparation of oxides from 45-cholcstenone and 45-androstenedione. XXI. Doubly unsaturated ketones of the androstane series, A., II, 199.

and Cohen, S. L., polyterpenes and polyterpenoids. CXIII. Oxidations in the oleanolic acid group without fission of the ring system; nature of the fourth oxygen atom of glycyrrhetic acid. CXVI. Oxidation of acetyloleanolic acid by chromium trioxide with opening of the double linking, A., II, 382, 510. and Fischer, W. F., sex hormones.

XVIII. Preparation of further enolesters from ketones of the cholestane and androstene series. XXVI. Oxidation of cholesteryl acetate dibromide with chromium trioxide, A., II, 65,

506.

Furter, M., and Leuenberger, H., polyterpenes and polyterpenoids. CXI. Empirical formula of glycyrrhetic acid, A., II, 202.

and Giacomello, G., polyterpenes and polyterpenoids. CX. Transformation of gypsogenin into hederagenin, A., II, 201. Carbon rings. XXXI. Relationships between m.p. and density in aliphatic and cyclic homo-

logous series, A., II, 235.
and Goldberg, M. W., sex hormones.
XIX. Preparation of \(\Delta^5 \cdot 3 - epihydroxyandrosten-17-one (Δ5-epidehydro-androsterone), A., II, 65. Polyterpenes and polyterpenoids. CXVII. Conditions and mechanism of dehydrogenation of homologous sterols and of

cholic acid, A., II, 497.

Goldberg, M. W., and Bosshard, W., sex hormones. XXII. Preparation of △5 - 3-epihydroxy - 17 - trans - hydroxyandrostene and 3-epihydroxy-17-transhydroxyætiocholane, A., II, 243.

Goldberg, M. W., and Hofmann, K., polyterpenes and polyterpenoids. CXII. Structure of the rings C—E of the pentacyclic triterpenes, A., II,

202.

and Hofmann, K., polyterpenes and polyterpenoids. CXV. Synthesis of 1:8-dimethyl- and 2-methoxy-1:8dimethyl-picene and their identification with the products of the dehydrogenation of pentacyclic triterpenes, A., II, 453. Sex hormones. XXIV. Addition of acetylene to the 17-keto-group of trans-androsterone and ∆5-transdehydroandrosterone, A., II, 505.

Hofmann, K., and Schellenberg, H., polyterpenes andpolyterpenoids. CVIII. Syntheses of the trimethylnaphthol obtained by dehydrogenation of pentacyclic terpenes, A., II, 68.

Ruzicka, L., and Leuenberger, H., polyterpenes and polyterpenoids. CIX. Glycyrrhetic acid, A., II, 68.

Leuenberger, H., and Schellenberg, H., polyterpenes and polyterpenoids. CXVIII. Catalytic hydrogenation of the αβ-unsaturated keto-group in glycyrrhetic acid and in keto-a-

amyrin, A., II, 510.

Oberlin, M., Wirz, H., and Meyer, Jules, sex hormones. XXV. Oxidation of saturated sterol derivatives with chromium trioxide, A., II, 497.

and Plattner, P. A., sex hormones. XXIII. Action of selenium dioxide on △5 -androstenediol, A., II, 377.

Salomon, G., and Meyer, K. E. [with Furter, M., and Gysel, H.], poly-membered heterocyclic compounds. XI. Preparation of the 14-, 15-, and 17-membered cyclic imines from aliphatic bromoamines; survey of the properties of poly-membered cyclic imines, A., II, 88.

Schellenberg, H., and Goldberg, M. W., polyterpenes and polyterpenoids. CXII. Dehydrogenation in the amyrin

group, A., II, 382.
Ruzicka, R., Brukner's barium chloride method [for determining the end-point of second saturation of sugar-beet juices], B., 960.

Ruzman, M. Z., and Rjabinin, J. M., application of the methane cycle in the liquefaction of air, B., 436.

Ryall, A. L. See Smith, E. Ryan, D. J. Seo Reilly, J.

Ryan, J. D., Watkins, G. B., and Libbey-Owens-Ford Glass Co., adhesive for laminated safety glass, (P.), B., 1342. Plastic for laminated safety glass, (P.), B., 1342.

Ryan, J. H., and Gibbons, T. P., paintremoving composition, (P.), B., 64.

Ryan, J. J. See Pyne, G. T. Ryan, L. W. See United Color & Pigment

Ryan, V. H., and Moran, J. A., insecticides, (P.), B., 604.

Rybeck, A. W., and Smith Co., T. L., mixing apparatus, (P.), B., 4. Ryde, J. W. See Gen. Electric Co.

Ryde, N., new intensity dissymmetry of the Stark effect components of hydrogen, A., I, 485.

Ryden, L. L., Glavis, F. J., and Marvel, C. S., reaction between sulphur dioxide and olefines and acetylones. VI. Ascaridole as a catalyst for the reaction, A., II, 315.

See also Glavis, F.J.

Ryder, S. E. A. See Friend, J. N. Rydin, A. See Josephson, \vec{B} .

Rydon, H. N., resin acid series. I. Synthesis of Vocke's unsaturated acid, $C_{10}H_{14}Q_4$, A., II, 159. Resolution of cis- and trans-norcaryophyllenic acid, A.,

Rygh, O., stability towards storage of vitamin-C in fruit juice, B., 493.
Rynearson, E. H., Horton, B. T., and Pemberton, J. de J., blood-oxygen in averable but goester. exophthalmic goitre, A., III, 13. See also Wilder, R. M.

Ryô, T., determination of water content of blood of 1239 boys and girls, A., III, 114.

See also Kuroda, K.

Rys, L., and Bönisch, A., bleaching of pulp during the year 1936, B., 125.

Ryschkevitsch, E., now refractories for resisting high temperatures, B., 1205.

Ryssel, W., sewage gas as motor fuel for municipal transport, B., 105.

Rysselberghe, P. van, application of affinity to coupled reactions, A., I, 246, Thermodynamics and rates of coupled or reversed reactions, A., I, 312. Application of affinity to coupled biochemical reactions, A., I, 468. Thermodynamic conditions and efficiencies of the coupling of chemical reactions, A., I, 518.

Grinnell, S. W., and Carlson, J. M., conductivities of concentrated binary mixtures of electrolytes with a common anion and at least one ion of charge two, A., I, 187.

and Knapp, S. M., transport number of silver in solutions of sodium thiosulphate practically saturated with silver chloride, A., I, 310.

and Nutting, L., conductivities of onemolal mixtures of alkali halides and nitrates, A., I, 187.

Ryu, K. See Shibuya, K.

Rzehulka, F., influence of cartridge diameter on detonation, B., 623.

Rzeppa, H.W. See Kuhn, R.Rzezacz, P., drying of fine coal by means of centrifuges, B., 859.

S.

S.M.A. Corporation. See Barnett, H. M., Cross, R. J., Frohring, W. O., Jersey, V., and Ungnade, O.

Saacke, F. C. See Rooke, R. M. Saad, K. See Samaan, K.

Saal, R. N. J., determination of the surface tension of solid substances, A., I,

and Blott, J. F. T., surface tension of solid substances, A., I, 153. and Labout, J. W. A., relation between

absolute viscosity and penetration of asphaltic bitumens, B., 202.

Sabalitschka, T., determination of glutathione in dried yeasts used medicinally, A., III, 222. Preservatives for foods, B., 977.

Sabatié, analytical constants of Algerian olive oil, B., 805.

Sabatini, N., glycolytic power of human blood, A., III, 372.

Sabelnikov, E. D. Seo Kedrinski, V. V. Sabetay, S., detection and approximate determination of primary in presence of secondary and tertiary alcohols by formation of triphenylmethyl ethers, A., II, 44. Present state of the chemistry of perfumes, B., 1133.

and Naves, Y. R., determination of primary alcohols by phthalisation in benzene, A., II, 132.
See also Naves, Y. R., and Palfray, L.

Sabin, A. B., and Olitsky, P. K., toxoplasma and obligate intracellular parasitism, A., III, 277.

See also Olitsky, P. K.

Sabin, F. R., Smithburn, K. C., and Thomas, R. M., cellular reactions to waxes of Mycobacterium lepræ, A., III, 226. Cellular reactions to wax-like materials from acid-fast bacteria; unsaponifiable fraction from the tubercle bacillus, strain H-37, A., III, 398. Sabine, G. B. See Ruedy, J. E.

Sabine, M., lowering the ash (sulphate) content of sugars, using the carbonatation process, B., 1110.

Sabinina, L. E., velocity of interaction of sulphuric acid with zinc in water and in other solution, A., I, 143.

and Polonskaja, L. A., diffusion of hydrogen through metallic cathodes, A., I, 33. Influence of certain ions on acid corrosion of nickel and iron, B., 144.

Sabo, B. G. See Stender, V. V.

Sabrazès, J., De Grailly, R., and Dervillée, P., glycogen content of liver cells after ingestion of unusual or toxic substances, A., III, 310.

See also Le Chuiton, F.
Saburov, N. V., Kalebin, M. I., and
Antonov, M. V., pink coloration of pears
in the course of preservation, B., 835.

Sacchetti, M., gum-producing bacteria, B., 716. Modena balsam vinegar, B., 719. Microbial and enzymic activity in presence of lead acetate; [preservation of beet pulp for analysis], B., 1108.

Sacchi, V. P. See Macchia, O. Sachanen, A. N. See Fabian, C. F.

Sachiev, I., reducing vibration of analytical balances, A., I, 202.

See also Schtscherbakov, V. G. Sachs, A., Levine, V. E., and Griffith, W. O., relation of copper and iron in blood; polycythæmia vera, A., III, 85. Bloodiron and -copper in hæmochromatosis, A., III, 124.

Sachs, A. P., and Petroleum Conversion Corp., cracked gasoline having low gum content, (P.), B., 1305.

Sec also N. V. Nieuwe Octrooi Maats. Sachs, H., relationship between antibody reaction and enzyme action, A., III, 413.

Sachs, J. H. See Du Pont de Nemours & Co., E. I.

Sachs, M. H., control of [citrus] red scale

in Palestine, B., 1390.

Sachsse, H., thermal decomposition of ethane, A., I, 248. Rôle of radicals in gas reactions, A., I, 621. Sachtleben " Akt.-Ges. für Bergbau &

Chemische Industrie, calcination of lithopone, (P.), B., 159. See also Mannesmannröhren-Werke.

Sack, H. See Claeys, J.

Sackett, A. J., and Sackett & Sons Co., A. J., dust-separating apparatus, (P.), B., 742.

Sackett & Sons Co., A. J. See Sackett,

Sacks, J., and Sacks, IV. C., blood- and muscle-lactic acid in the steady state, A., III, 385.

Sacks, W. C., and Shaw, J. R., carbohydrate and phosphorus changes in prolonged muscular contractions, A., III, 385.

Sacks, W.C. See Sacks, J.

Sacquépée, E., and Jude, A., bacteriological examination of tinned foods, B., 836.

Sacrez, R. See Bezssonoff, N. Sadd, J. A., respirators, gas masks, etc.,

(P.), B., 94.

Sadikov, B. A., magnetic analysis of steel, B., 1062.

Sadikov, V. S., isolation of amino-acids, peptides, and cyclopeptides from pro-

tein hydrolysates, A., III, 199.

Novoselova, G., and Rosanova, V.,
autoclave decomposition of bloodalbumin by carbonate, A., III, 2.

Sadikov, V. S., and Kristallinskaja, R. J., isolation of cyclopeptides from proteins of the mollusc Pecten islandicus, A., III, 199.

and Pesina, A. G., autoclave splitting of non-extractable portion of beef by means of an aqueous solution of lithium carbonate, B., 82.

and Remennikova, E. L., biolysis, or fission of gelatin by pure cultures of living bacteria, A., III, 357. and Vadova, V. A., alcoholysis of serum-

albumin in autoclaves, A., III, 111.

Sadovnikov, P., critical conditions of the reaction of oxidation of ethane, A., I,

Sadron, C. See Signer, R. Sadtler, C. B., and Barber-Colman Co., heat treatment of high-speed steel, (P.),

Sadtler, S. S. See Hepburn, D. M.

Saegebarth, E., Broggini, A. J., and Steffen, E., high octane-number blending stocks produced by solvent extraction, B., 1004.

See also Edeleanu Ges.m.b.H.

Saegusa, Hachiro, and Nakayama, Y., benzylcellulose. I., B., 767.

Saegusa, Hikoo, and Kikuehi, K., scattering of fast electrons by thin foils, A., I, 387.

and Matsumoto, Tsutomi, variation in conductivity of thin film of sodium chloride and rock-salt crystal with temperature, A., I, 395. Anomalous change by heat treatment of electrical conductivity of thin films of potassium chloride and sulphur, A., I, 450.

Saeki, H. See Shibuya, K. Sänger, R. See Potapenko, G. Säuerländer, E. See Lohmann, H.

Safford, C. E., and Stark, C. N., skim-milk agar for routine milk counts, A., III, 490. Safir, H. See Chalonge, D.

Sagaidak, A. N. See Rusinov, L. I.

Sagane, R., radioactivity induced in sulphur, A., I, 108.

See also Chang, W. Y.

Sagawa, T., equilibrium of the system TiO_2 - SO_3 - H_2O at 100° . I. Hydrolysis product of titanium sulphate solution, A., I, 618.

Sage, B. H., Davies, J. A., Sherborne, J. E., and Lacey, W. N., phase equilibria in hydrocarbon systems. XVII. Ethane-crystal oil system, A., I, 30.

Inman, B. N., and Lacey, W. N., viscosity of hydrocarbon solutions; methane-propane-crystal oil system, A., I, 507.

Webster, D. C., and Lacey, W. N., phase equilibria in hydrocarbon systems. XVIII. Thermodynamic properties of ethane. XIX. Thermodynamic properties of n-butane, A., I, 413, 606.

Sage, C. E., commercial thyme, B., 729. Sagebarth, B., rotary drums for drying, cooling, or calcining purposes, (P.), B.,

Sager, T. P., gas-retaining fabrics, (P.), B., 433. Preparation of thin films, B., 628. Permeability of organic polysulphide resins to hydrogen, B., 809. Permeability of organic polysulphide resins to hydrogen [and helium], B., 1370. Sager, V. J., and Leonard, S. L., relation of

cestrin and pregnancy urine hormone in influencing uterine motility, A., III, 150.

Saggese, V. See Verona, O. Sági, A. See Bienenstock, M. Sági, E. See Bienenstock, M.

Sagi, J., bakery products, (P.), B., 977. Sagoschen, J. A., incrustations in evaporators in tanning extract manufacture, B., 951.

and Luft, A., effect of concentration and method of drying of [vegetable] tanning extracts on their viscosity,

Sah, P. P. T., synthesis of vitamin-C from sucrose, A., II, 176. Azides.
VIII. β-Naphthazide as a reagent for identification of primary and secondary amines, A., II, 360. Origin of vitamin-C; experimental evidence supporting Sah's hypothesis, A., III, $10\bar{4}$

and Chang, K. S., synthesis of dulcin by the Curtius reaction, A., II, 58. and Chiang, S. H., semicarbazides. a-Naphthylsemicarbazide as a re-

agent for identification of aldehydes

and ketones, A., II, 129. and Fang, H. Y., d-galacturonic acid from peels of Chinese pomelo, A., III,

and Han, W. P., phenylsemioxamazide (oxanilhydrazide) as reagent for identification of aldehydes and ketones, A.,

and Kao, Cheng Heng, di-n-heptyl phthalate as a bath liquid in determining m.p. of organic compounds, A., I, 377. Application of Curtius degradation reaction to the synthesis of phenylethylamine, A., II, 95. o-Nitrobenzhydrazide as reagent for identification of aldehydes and ketones, A., II, 130. and Liu, T. F., preparation of hydantoin

from glycine and nitrocarbamide, A.,

II, 39ŏ.

and Tao, P. C., semicarbazides. VI. β-Naphthylsemicarbazide as a agent for identification of aldehydes and ketones. VII. 3-5-Dinitrophenylsemicarbazide as a reagent for identification of aldehydes and ketones, A., II, 129.

and Tien, C. H., 3:5-dinitro-o-toluic acid as a reagent for identification of amines, A., II, 129. and Tseu, C. Z., application of Curtius

reaction to the synthesis of β -methoxyβ-phenylethylamine hydrochloride, A.,

and Wu, C. S., azides. VII. m-Chlorobenzazide as a reagent for the identification of amines, A., II, 129. and Yuin, K. H., 3:5-dinitro-p-toluic

acid as a reagent for the identification

of amines, A., II, 436. See also Chang, M. C., Fang, H. Y., Kao, Cheng Heng, and Kao, Chung-Hsi.

Saha, A. See Goswami, M. Saha, M. N., molecules in interstellar space? A., I, 336. Action of ultraviolet sunlight on the upper atmosphere, A., I, 435.

and Kothari, D. S., β -ray activity of radioactive bodies, A., I, 4. and **Tandon**, A.N., demountable vacuum

furnace, A., I, 330.

Saharia, G. S. See Desai, R. D. Sahasrabuddhe, D. L., and Abhyankar,

V. S., nitrogen recuperation in soils of the Bombay presidency. IV., B., 269. Sahay, V. See Varma, P. S. Sahr, E. von. See Menzel, H.

Sahyun, M., and Feldkamp, R. F., determination of zinc in biological material, A., III, 82.

Goodell, M., and Nixon, A., factors influencing stability of insulin, A., III, 152.

Saifer, A., and Hughes, J., dioxan as a reagent for detection and determination of small amounts of iodide; application to detection of iodide in iodised salt, A., I, 260.

Saillard, E., nitrogen content of beet and molasses, pre- and post-war, B., 170.

Sainderichin, N. See Folliet, A., and Follsain Synd.

Saini, H. See Weigle, J.

Saint, S. J., report of chemical section [sulphate, copper, and iron in molasses],

St. Clair, H. W. See Gottschalk, V. H. St. Hill, T. N., and Petroleum Rectifying

Co. of California, electric dehydrator [for oil emulsions], (P.), B., 19.

St.-Jacques, E. C., furnaces for treatment of pulverulent materials, (P.), B., 96, 300. Heat exchangers for fluids, (P.), B., 301.

St. John, J. L., and Caster, A. B., nature of watery whites of eggs, B., 1400. See also Groves, K., and Heiman, V.

St. Louis Club, modified phenolic resin varnishes, B., 155.

St. Louis University. See Doisy, E. A. Saint-Maxen, A. See Dubrisay, R.

Saito, G. (Fukuoka), condition of dissolved highly polymerised organic compounds, especially cellulose. I. and II., A., I, 79.

See also Breuer, F.

Saito, G. (Wien), blood-sugar in hypo-function of the rabbit pituitary; influence of glucose, adrenaline, and insulin, A., III, 38. Saito, H. Sce Rokusho, B.

Saito, Kenkichi, influence of salicylic acid, sodium salicylate, and of soluble aspirin on growth of cultures of fibroblast in vitro from the ventricle and on pigmented epithelial cells of the iris: histological changes caused by these drugs, A., III, 26. Influence of certain drugs of the antipyretic group on the cultures, A., III, 26. Influence of some drugs of the cocaine group in vitro on cultures of fibroblast, A., III, 217. Influence of phosphorus on fibroblast culture, A., III, 264. Cumulative action of sublimate, strychnine, and arsenious acid on cultures of iris epithelium in vitro, A., III, 310.

Saito, Koichiro, study of blood-gases with a new micro-apparatus. I. Modification of the Harington and Van Slyke extraction chamber. II. Gaseous content of arterial, cutaneous, and venous blood in the normal state, acidosis, and

alkalosis, A., III, 335.
Saito, M., cattle bones; general composition of pig bones; general composition and protein-nitrogen distribution of pig's bones, A., III, 167, 415. Mongolian sheep wool. I. Macroscopical, microscopical, and chemical investigations, B., 123. Digestion trials on various feeds, B., 726.

and Kozima, M., Mongolian milk products. I. Nature and chemical com-

position, B., 1261. and Tinzel, T., Mongolian milk products. II. Physical, chemical, and bacteriological investigations on fat of Mongolian melted butter, B., 1261. Saito, S., ageing of rubbers by exposure on Mount Fugi and on level land, B., 1377. Saito, Y., influence of drugs which act on the autonomic nervous system on sulphur

metabolism, A., III, 137.

Saitschuk, V. I., and Narskich, O. G., stabilisation of aërohydrosol by oil-like substances, A., I, 238. Formation of artificial mist on condensation nuclei, A., I, 238.

Saiyed, I. Z., and Kanga, D. D., fruits of Solanum xanthocarpum, A., II, 39.

Sajzeva, L. P. See Djatschkov, V. D. Sakaguchi, K., Inoue, T., and Tada, S., production of oxidoethylene-a\beta-dicarboxylic acid by mould, A., III, 182. and Shizume, Y., urease of yeast, A., III,

Sakakibara, I., antigen of the Wassermann

reaction, A., III, 85.
Sakamoto, T. See Fujita, A.
Sakata, S. See Yukawa, H.

Sakata, Y. See Takei, S.
Saklatwalla, B. D., evolution of new metals, B., 575.

Sakmin, P. K., production of crude nitrogen-hydrogen mixture for synthesis of methyl alcohol and ammonia by condensation of coke-oven gas at low temperature and high pressure, B., 341. Plant for separation of coke gas by condensation at -160°/50 atm., B., 1001.

Sakostschikov, A., Neshelskaja, R. G., and Pichunova, N. A., decomposition of hypochlorites in presence of activators. I. Action of activators on hypo-

chlorite solutions, B., 540. and Pichunova, N. A., decomposition of hypochlorites in presence of activators. II. Change in composition of hypochlorite baths during decomposition in presence of activators, B., 540.

and Tumarkin, D., homogeneity of plant celluloses and their products.

1. Cross-section elements and methods of their separation. II. Content of cross-structure elements in plant celluloses. III. Composition of the substance comprising the transverse elements (QSE) [of fibres], B., 24, 892.

Sakuma, I., and Momose, I., bleaching of Japan wax. VIII. and X., B., 153, 1083. Momose, I., and Shomura, J., bleaching of Japan wax. IX., B., 808.

Sakurada, I., calculation of lengths of extended molecules of low mol. wt. from the specific viscosity of their solutions, A., I, 506. Calculation of the lengths of particles of polymerised compounds from the specific viscosity of their solutions, A., I, 506.

and Hutino, K., intramicellar swelling of cellulose in water, A., I, 80.

and Kotera, A., changes in viscosity properties of cellulose, B., 225.

and Matsushita, Y., X-ray diagrams of regenerated silks, B., 765. Structure and elastic properties of silk fibroin, B., 765. X-Ray study of the action of acetone and acetic acid on acetylcellulose, B., 767.

and Taniguchi, M., diffusion of heterodisperse substances, A., I, 460.

and Tokuno, Y., effect of temperature and amount of acetic anhydride on rate of acetylation of cellulose as fibrous material, B., 767. Influence of external form and of pretreatment of the fibre on rate of acetylation of fibrous material, B., 767.

Sakurada, I., and Watanabe, I., fibrous, acetone-soluble acetylcellulose. X-Ray diagram and mechanical properties of the film, B., 767.

See also Taniguchi, M.

Sakurada, S. See Nakajima, K. Sakurai, B., electrolytic reduction of malcimide and pyrroline, A., II, 165.

Sakurai, K., constituents of the essential oil of Mentha pulegium, L., B., 187.

Sakurai, S. See Yoshimura, S. Sakurai, Y. See Asahina, Y.

Sakurazawa, K., and Hara, R., synthesis of sodamide from its elements, and its thermal decomposition. I. II. Thermal decomposition, A., I, 143, 256.

Sala, C. J. See Du Pont de Nemours & Co., E. I.

Saladino, A. See Marino, S.

Salaman, R. N., acquired immunity against the "Y" potato virus, A., III, 276.
Salathiel, R., Burch, J. M., and Hixon,

R. M., synthesis of a-substituted tetrahydropyridines and piperidines, A., II,

Salauze, J. See Cymboliste, M.

Salchow, R., factice [rubber substitute], B., 949.

 Saldau, P. J. See Schamrai, F. I.
 Salellas, J. F., formation of nitrobenzo-phenones during nitration of diphenylmethane, A., II, 373.

See also Zappi, E. V.
Salenius, C. G. T. See Aktieb. Lavator.
Salgado, M. L. M., manurial value of two

Ceylon seaweeds, B., 708.

Salgues, R., ratio of the feather- to bodyweights [of chicken]; chemical constitution, A., III, 172. Normal level of phosphorus-containing blood constituents in amphibians and reptiles, A., III, 195. Effect of diet on composition of feathers; cholesterol content, A., III, 199. Mineral matter of feathers and normal phosphorus: calcium ratio, A., III, 295. Wool of sheep with osteomalacia, A., III, 462. Parasitic diseases of olives and physicochemical changes in the

extracted oil, B., 462.
Salisbury, G. W., Miller, J. I., and Hodson, A. Z., nomographic charts for determining relative value of feeds, B., 1403.

See also Asdell, S. A.

Salisbury, L. F., lipins of Connecticut shadegrown tobacco seed, A., III, 107.

Salit, W., and O'Brien, C. S., cholesterol content of cataractous human lenses, A., III, 13.

Salitra, J. See Janus, R. I.

Salkeld, C. E. Sec Imperial Chem. Industries.

Salkind, J. S., and Aizikovitsch, M. A., preparation of diacetylene glycols, A., II. 174.

and Bulavski, G. L., catalytic dehydrogenation of ethylbenzene to styrene, A., II, 236.

and Kesarev, V. V., catalytic oxidation of phenanthrene by air, A., II, 195. Catalytic oxidation of certain aromatic

compounds, A., II, 291. and Markov, I. F., preparation of methyl methacrylate from isobutyric acid, A.,

II, 397.

and Martinson, E. E., hydrogenation of acetylenic compounds. XXVI. Catalytic hydrogenation of a-glycols of the acetylene series. XXVII. Hydrogenation of s-diphenylditolylbutinenediol, A., II, 16, 288.

Salkind, J. S., Rostovski, E. N., Arbusova, I. A., and Teterin, V. K., synthesising camphor from Soviet turpentine, B., 1308.

and Schuvalov, N. N., hydrogenation of acetylenic derivatives. XXVIII. Dicyclohexenylacetylene and its hydro-

genation, A., II, 372. and Smagina, Z. V., hydrogenation of acetylenic compounds. XXVII. Catalytic hydrogenation of $\beta\epsilon$ -dimethyl- $\Delta^{\alpha\epsilon}$ -hexadien- Δ^{γ} -ine, A., II, 224.

Salkind, T. L., suitability of ordinary methods of determining adsorbable phosphates in analysis of alkaline soils, B., 376. Effect of liming on absorbability of iron and aluminium phosphates [in soil], B., 376.

Sallans, H. R., and Anderson, John Ansel, sources of error in determination of the diastatic power of malt, B., 1394.

Snell, J. M., MacKinney, H. W., and McKibbin, R. R., water-soluble acid substances in the raw humus of podsol soils, B., 1384.

See also Anderson, John Ansel.

Salle, A. J., and Lazarus, A. S., resistance of bacteria and embryonic tissue to germicides. VI. Iodine trichloride. VII. Potassium mercuric iodide, A., III, 72.

and Shechmeister, I. L., effect of lactogenic hormone on embryonic tissues cultivated in vitro, A., III, 42.

See also Dunn, R. W.

Saller, vacuum concrete, B., 675.

Sallet, J. See Chabrol, E. Salley, D. J., adsorption of oxygen by mercerised cotton, B., 898.

Salminen, A., weathering of rocks and composition of clays, A., I, 155, 383. Composition of [Finnish] clays as shown by density measurements, B., 476. [Composition of Finnish clays], B., 593. Borer for soil surveyors, B., 1097

Salminen, V. I., apparatus for washing out precipitates, A., I, 268.

Salmon, E. S., preservative value of varieties of hops of American type, B., 1115.

See also Goodwin, W.

Salmon, U. J., and Frank, R. T., effect of emmenin on gonadotropic hormone excretion in castrates and spontaneous menopause, A., III, 437. See also Frank, R. T.

Salmon, W. D., and Goodman, J. G., vitamin-B complex. I. Effect of fats and of individual esters on vitamin-B requirement of rats, A., III, 188. Alleviation of vitamin-B deficiency in the rat by certain natural fats and synthetic esters, A., III, 494.

See also Schrader, G. A. Salmon-Legagneur, F., and Vene, J., reactivities of a- and β-campholides; preparation of corresponding hydroxycampholic acids, A., II, 200.
Salmond, H. M. See Graviner Manufg.

Co.

Salmony, A., röntgenographic study of macro- and micro-structure in the rubber and gutta-percha industry, B., 66. Application of the modern fluorescence microscope in the leather industry, B., 592.

Salo, M. See Fordyce, C. R. Salomon, E. See Karrer, P. Salomon, G. See Ruzicka, L. See Ruzicka, L. Salomon, K. See Stern, K. G.

Salomon, S. M. See Bonner, Thomas W. Salomon, T. See Weiss, H.

Salomonski, M. See Ruben, H.

Salter, W. T., and Lerman, J., genesis of thyroid protein: clinical assays of artificial thyroid protein in human myxodema, A., III, 205.

See also Scharles, F. H.
Saltschinkin, A. P., peptisation of hemp proteins by sodium salicylate, B., 390.
Saltzman, M. See Hollander, F.

Salvatori, A., chlorine content of the albino rat in relation to age, A., III, 131. [Simulation of] post-operative hypo-chloramia [by injection of muscle ex-

tract], A., III, 452. Salvesen, J. R. See Sandborn, L. T. Salvi, P., cyanide poisoning; toluylenered as antidote, A., III, 479.

Salvin, F. G. See Meek, H. O. Salzberg, H. K. See Borden's Milk Products Co.

Salzberg, P. L. See Du Pont de Nemours & Co., E. I., and Grasselli Chem. Co. Salzer, F. See Fischbeck, K.

Salzer, W. See Bamann, E. Samaan, A. See Handovsky, H.

Samaan, K., and Asreegy, M. I. E., effects of syntropan, enatin, bromosalizol, and eupaverinc on the human ureter, A., IIÎ, 28.

and Saad, K., mode of action of methyloctenylamine hydrochloride (octinum), A., III, 134.

Samarin, A. M. See Chipman, J.

Samartzev, A. G., and Evstropiev, K. S., overvoltage phenomena in electrolytic deposition of metals on an indifferent electrode, A., I, 33.

Samartzeva, I. A. See Gerschenovitsch, M. S.

Samcoe Holding Corporation. See Cohn, Samuel.

Samec, M., plant colloids. XLIV. Soluble

starch from amyloses, A., II, 370. [with Battestin, M.], enzymic amylolysis. V. Action of a-amylase from malt on constituents of starch, A., III, 394.

and Katz, J. R., amorphous starch

spectra, B., 1257.
Samén, E., kinetics of bromination of aliphatic aa-disulphones in aqueous solutions of hydrobromic acid, A., I,

See also Ramberg, L.

Sameshima, J., Kidokoro, M., and Akamatu, H., oiliness of liquids. I. Determination of static friction coefficients, A., I, 72.

and Miyake, M., oiliness of liquids. III. Kinetic friction coefficients, A., I, 231. and Tsnbuku, Y., oiliness of liquids. IV. Measurements of the static friction coefficients by method of inclination, A., I, 294.

See also Akamatu, H. Samigin, M. M., use of refraction for determining mol. wt., A., I, 330. Use of refractometry in organic analysis, A., II,

Samis, C. S., transport numbers of some salts in aqueous solution at higher temperatures, A., I, 244.

Samisch, R. M., plant phenolases, A., III,

Sammartino, U., pharmacological action of tannic acid. VII. Action on diuresis produced by hypertonic sodium chloride solution, A., III, 308.

Sammartino, U., effect of the diffusion factor (-R) on absorption of drugs. I. Rate of absorption of subcutaneously and intramuscularly injected strychnine. II. Rate of absorption of intraperitoneally injected strychnine, A., III, 391.

Samochvalov, K. N., determination of the density of aërodispersoid particles (aërosuspensions of ammonium chloride, mercuric iodide, and magnesium oxide), A., I, 614.

and Kozuchova, O. S., stabilisation of aërosols of ammonium chloride and

mercuric iodide, A., I, 180. Samorodnitzki, N. J., Dibina, P. V., and Eliagina, E. J., treatment of crude calcium acetate from generator gas liquor,

Sample, A. B. See Carr, W. G.

Sampson, F. R., and Mussehl, F. E., effects of various levels of lucerne meal on development of body organs of cockerels, A., ĪII, 209.

Sampson, M. B., and Bleakney, W., relative abundance of the isotopes in Mn, Nb, Pd, Pt, Ir, Rh, and Co, A., I, 4.

Sampson, W. L., and Keresztesy, J. C., extraction of vitamin- B_1 from international standard acid clay, A., III, 280.

See also Keresztesy, J. C.

Samson, G. A. See Vidal, E. N. Samson, E. W., physics in the paper industry, B., 1037.

Samson-Himmelstjerna, H. O. von, removal of aluminium and iron from copper and copper alloys, B., 1219. Sec also Oelsen, W.

Samuel, F. B. See Standard Oil Development Co.

Samuel, G., whiteheads or take-all in wheat, B., 821.

See also Best, R. J.Samuel, J. M. See Stout, H. H.

Samuel, L. See Roche, A. Samuel, R., and Usman, M., absorption spectra of solutions of some halides and oxyhalides of sulphur, selenium,

and tellurium, A., I, 442. See also Asundi, R. K., Haq, M. I., Hunter, R. F., and Parti, Y. P. Samuel, W. See Bruce, E. L.

Samuels, H., paint pigments, B., 589. Samuels, L. T., and Ball, H. A., carbo-

hydrate metabolism in hypophysectomised rats. I. Relation of method of glucose administration to bloodsugar, A., III, 346.

Butts, J. S., Schott, H. F., and Ball, H. A., glycogen formation after alanine administration in adrenalectomised animals, A., III, 174.

See also Ball, H.A., and Deuel, H.J., jun. Samuels, M.L. See Boyles, A. Samuelsen, G.S. See Haley, F.L.

Samuelsen, S., bleaching of sulphite pulp,

Samuelson, A., effect of pancreatic tissue extract on cholesterol of blood in cardiovascular arteriosclerosis, A., III, 299.

Samygin, M. M., determination of heats of combustion from refractive indices, A., I, 619.

San Pedro, A. V., storage-temperature requirements of lanzones (Lansium domesticum correa), B., 283.

Sanada, Y., preparation and hydration of CaO,Cr₂O₃ and 2CaO,Cr₂O₃, A., I, 147. Preparation and hydration of CaO,Fe₂O₃ and 2CaO,Fe₂O₃, A., I, 257.

Sanada, Y., celite. III. Preparation and hydraulic properties of celite cement, B., 242. Strength of plastic mortars and concrete made from cement of varying fineness, B., 555. Fine-grinding of cement. V. Impact test of clinker, B., 784. Magnesia of Portland cement. III. Effect of magnesia on preparation of celite. IV. Effect of magnesia on preparation of 3CaO,Al₂O₃, B., 1343.

and Nishi, G., magnesia of Portland cement. I. Preparation of magnesium ferrite, MgO,Fc₂O₃. II. Effect of magnesia on preparation of 2CaO,Fc₂O₃, B., 347, 784. Sanborn, J. R., microbiological control in

manufacture of paper wraps and containers for foods, B., 1036. Industrial utilisation of gums produced by fungi, B., 1115.

and Internat. Paper Co., [transparent] sheet material, (P.), B., 30.

Sanborn, N. H. See Kohman, E. F. Sanborn, R. E. See Miller, I.

Sanchez, J. A., colour reactions for cardiac glucosides; digitoxin, strophanthin-K, ouabain, and digitalis verum, A., II, 52. Colorimetric determination of carbamido, A., II, 139. Functional chemistry of morphine; new colour reaction for morphine and its pseudolic derivatives, A., II, 268. Colour reaction of hexoses and polyhexoses: application to colorimetric determination of glucose in blood, A., III, 372.

Sanchez-Rodriguez, J., and Sardá, J. M., antiberiberi action of phenanthrene derivatives, A., III, 364.

Sanchis, J. M., testing and significance of fluorine in water supplies, B., 193.

Sancho, J. See Moles, E.

Sandberg, M., Perla, D., and Holly, O. M., effect of complete and partial hypophysectomy in adult albino rats on water, chloride, sodium, potassium, and sulphur metabolism, A., III, 341. Metabolism of water, chloride, potassium, sodium, calcium, magnesium, and phosphorus in adrenalectomised rats, A., III, 347.

See also Perla, D.

Sandborn, $L.\ T.$, Salvesen, $J.\ R.$, Howard, G. C., Marathon Paper Mills Co., and Howard Co., G. C., manufacture of vanillin [from lignin], (P.), B., 1177.

Sandelin, O. See Hägglund, E. Sandell, E. B., determination of copper, zine, and lead in silicate rocks, A., I,

and Kolthoff, I. M., micro-determination of iodine by catalytic method, A., I, 630.

See also Kolthoff, I. M.

Sander, F., determination of iodine in drinking and mineral water, B., 93.

Sandera, K., deposits on steam side of heating bodies of [sugar-factory] evaporators, B., 960. Graining of sugar crystals by seeding, B., 961. Use of "Collactivit" in the sugar industry, B., 962, 1256.

and Mircev, A., solution time of pressed and cast refined sugars, B., 484. Affinability test of raw sugar by crystal classification, B., 1113. Influence of warming and storage on solubility of tablet sugar, B., 1113. Measuring flow through a layer of sugar crystals, B., 1114.

Sandermann, W., analysis of resins and essential oils, B., 1370.

Sandero, A., two granites from Cogne mines, Aosta valley, A., I, 270.

Sanders, G. P. See Burkey, L. A. Sanders, H. L. See Gardiner, W. C., and Kolthoff, I. M.

Sanders, W. E., and Gen. Motors Corp.,

metal-working process, (P.), B., 931. Sanders-Dolgoruki, E. See Tru Colour

Sanderson, D. H. See Rowell, R. H. Sanderson, L., boron: the metal and its uses, B., 145. Beryllium and its alloys, B., 1222.

Sanderson, (Miss) P. M. See Briscoe, H. V. A., and Matthews, (Miss) J. W.

Sanderson, T. See Rowell, R. H.
Sandhagen, M. See Hagen, C.
Sandholzer, L. A., Mann, M. M., and
Berry, G. P., determination of ultraviolet light absorption by certain bacteriophages, A., III, 435. See also Tittsler, R. P.

Sandin, R. B., Kulka, M., and McCready, R., decomposition of iodonium salts, A., II, 490.

See also Kulka, M.

Sando, C. E., colouring matters of Grimes Golden, Jonathan, and Stayman Winesap apples, A., II, 206.

See also Markley, K. S.

Sandomirski, M., and Michailovskaja, O., washing of fats after refining, B., 584.

Sandonnini, C., and Borghello, N., electrolysis of iodine monochloride in various solvents, A., I, 525.

Sandor, G., physico-chemical problem of

tuberculin, A., III, 36.
[with Marcus, A.], isoionic point of serum-proteins. II. Influence of neutral salts, A., III, 248.

See also Boquet, A., and Schaefer, Werner.

Sandri, R., heat changes of slow reactions. I. Continuous calorimetry, A., I, 151. Prediction of temperature rise in concrete dams, B., 40. Prediction of temperature rise in concrete masses, B., 555. Sandrinelli, R. See Vita, N.

Sands, J. W., effect of composition and heat treatment on properties of steels for low-temperature service, B., 1214.

and Walls, F. J., nickel-alloy gear materials and their heat treatments, B., 795.

Sandstedt, R. M., adaptation of the ferricyanide maltose method to high diastatic flours, B., 1119. Determin-ation of sucrose in flour, B., 1397.

and Blish, M. J., effect of pressure on rate of gas production in yeast fermentation [of flour], B., 386.

Blish, M. J., Mecham, D. K., and Bode, C. E., identification and measurement of factors governing diastasis in wheat flour, B., 384.

See also Blish, M.J. and there, J.S. See Lennox, C.E.Sandtner, J. S. See Lennox, C. E. Săndulescu, T. See Blum, I. L. Sandvoss, C. See under Alexander &

Posnansky.

Sanfilippo, G., and Cannava, A., carbo-hydrates in extracts of flowers of Opuntia ficus-indica, A., III, 287.

Sanford, A. H. See Sheard, C. Sanford, H. N. See Crane, M. M.

Sangiorgi, G., lytic principles in activated sludge, B., 92.

Sanguineti, T. See Lippmann, E.

Sangwin, W., apparatus for drying and heating stone, slag, and other materials, (P.), B., 509.

Sanielevici, A. S., thermal effect of rays

from radioactive bodies, A., I, 57. Sankaran, D. K. See Guha, P. C. Sankaran, G., electro-dialyser, A., I, 428.

and Krishnan, B. G., heart rate in vitamin- B_1 and -C deficiency, A., III,

and Patnaik, M., molecular formula of

thyroglobulin, A., III, 323. and Rajagopal, K., carbohydrate metabolism. I. Micro-electrometric determination of blood-sugar. II. Effect of a high-carbohydrate diet containing sugar on the glucose-tolerance curve in the albino rat, A., III, 291, 470.

See also Ranganathan, S. Sankewitsch, E. C. See Cholodny, N. G. Sankowsky, N. A., and Stanco, Inc., preparation of insecticides containing derris extracts, (P.), B., 1255.

Sanlaville, S. See Morel, A. Sanna, A., condensation products of s-diphenylcarbazide and sugars, A., II,

Sannié, C., chromatography under pressure, A., I, 266.

Amy, L., and Poremski, V., Raman effect, A., I, 49.

and Poremski, V., constitution of peptides. I. Structure of organic acids; Raman bands of the acidic function in acids and their derivatives, A., II,

Sano, K., oxidation equilibrium of magnesium chloride by water vapour, A., I, 185. Sansone, R., mulberry tree as a paper material, B., 768.

Santa, N. See Gradinesco, A. Santalov, F. A., electrometric determination of $p_{\rm H}$ of media of high viscosity, A., I, 535.

Santangelo, M. Seo Artom, C. Santarelli, L., puzzuolana. V. Microscopy of some Italian puzzuolanas, A., 1, 205. See also Sestini, Q.

Santenoise, D., Brieu, T., and Stankoff, E., properties of vagotonin, A., III, 93. Stankoff, E., and Vidacovitch, M., relationship between dose and effect of

vagotonin, A., III, 93.

Santi, R., and Zweifel, R., pharmacology of alkaloids of Erythrophlæum guineense and of Madagascar species. I. Toxicity and general action in frogs and mice. II. General action in rabbits, A., III, 179.

Sanzenbacher, K. See Saner, E. Sapelow, A. P. See Antipov-Karataiev, I. N.

Saphir, IV. See Hess, J. H. Sapin. See Decourt, J.

Sapiro, R. H. See Newitt, D. M.

Saposhnikov, D. I., effect of oxidationreduction potential of medium on quantum yield of purple sulphur bacteria, A., III, 224.

See also Tschesnokov, V. A.

Saposhnikov, L. M., coking properties and classification of coals, B., 1292.

Saposhnikova, A. F. See Petrov, A. A. Saposhnikova, N. V., and Linetzkaja, S. G., osmotic anomalies in the system waterethyl acetate-salt, A., I, 302.

Sapoznik, H. I. See Necheles, H. Saracini, M. See Kranss, W.

Saraga, E., manufacture of transparent flexible sheets, (P.), B., 1325.

Saran, A. B., effect of wounding on respiration in starving leaves of Aralia gurlfuylei, A., III, 159.

Saran, E. See Wartenberg, H. von. Sarata, U., biochemistry of copper. XV. Blood-copper and sexual phenomena. XVII. Copper and pigmentation of leaves and flowers. XVIII. Variations in copper content of assimilative and reproductive organs during development

of plants, A., III, 213.

Sarbeteva, W. S. See Malkin, S. I.

Sardá, J. M. Seo Sanchez-Rodriguez, J.

Sardik, Inc. See Cowgill, W. W.

Sargent, E. H. G. See Reckit & Sons.

Sargent, L. E. See Standard Oil Development Co.

Sargent, N. A., and Merrimac Chem. Co., hydrolysis of alkyl sulphate esters, (P.), B., 648.

Saric, R. See La Barre, J. Sarinski, V. See Levina, S. Sarjant, R. J., fuel economy in melting and

reheating furnaces, B., 999.
and Middleham, T. H., heat-resisting steels for the glass industry, B., 439.

See also Miller, W. T. W.Sarkady, L. See Went, S.
Sárkány, E. See Emödi, G.
Sarkar, S. N. See Bose, S. R.
Sarkisov, E. S., influence of composition

of the electrolyte on electrodeposition of iron, A., I, 521.

and Michalev, P. F., now effect in olectrodic processes, A., I, 245.

Sarre, H., and Wachter, H., arterialisation of blood. VI. Comparison of calculated and experimentally determined decrease in oxygen content of arterial blood during respiratory pause, A., III, 411.

Sarrouy, C. See Tournade, A. Sartoretto, P. A., and Sowa, F. J., cleavage

of diphenyl ethers by sodium in liquid ammonia. I. o- and p-Substituted diphenyl ethers, A., II, 239.

Sartori, G., polarographic study of complex cyanides of nickel and cobalt, A., I, 84. Adsorption of hydrogen, carbon dioxide, and methyl alcohol on zinc oxide, A., I, 357. Adsorption of hydrogen, carbon monoxide, and carbon dioxide on zinc oxide at temperature of synthesis of methyl alcohol, A., I, 358. See also Caglioti, V.

Sartory, A., Sartory, R., Hufschmitt, G., and Meyer, Jacques, lipin-protein metabolism in infectious diseases, A., Ill,

124.

Sartory, R., and Meyer, Jacques, influence of partial vacuum or pressure on biochemical properties of lower fungi, A., III, 99.

Sartory, R., Meyer, Jacques, and Walter, A., biochemical properties and experimental pathology of a pulmonary actinomycos (Actinomyces nitrogenes, nov. sp.), A., III, 315.
Sartory, R. See Sartory, A.

Sarudi, I., determination of arsenic as magnesium pyroarsenate, A., I, 530.

Sarup, A. See Puri, A. N. Sarver, L. A., reactive groups in organic

reagents and their application in inorganic analysis, A., I, 196. and Kolthoff, I. M., electrochemical

properties of diphenylbenzidinesulphonic acid, A., II, 97.

Sarzana, G., diffusion of calcium from milk through membranes of varying per-meability, A., III, 253. Electro-phoresis of the diffusible calcium of milk, A., III, 253.

See also Artom, C.

Sas, L., vitamm-C content of adrenals of castrated rats, A., III, 45. Influence of protein feeding on the nitrogenous blood constituents in dogs after experimental kidney lesion, A., III, 301.

Sasaki, R., iodine in poultry, A., III, 7. Sasaki, S., electric welding of stainless

steels, B., 682.
Sasaki, T. See Asahina, Y.
Sasaki, Tsunetaka, stability of foam, A., I, 131.

Sasano, K. T., serological study emphasising p_{π} of the blood, in conjunction with the red-cell sedimentation test, leucocytic index, and complement fix-ation test, A., III, 117. Saschek, W., micro-determination of

organic sulphur, A., II, 529.

Sasiadek, M., ionisation and pressure during explosion of solid explosives, A., I, 224.

and Tucholski, T., manometric bomb and its application to investigation of explosive properties of picrates, B., 19Ō.

Saslavski, A. I., physicochemical conditions of crystallisation of KClO3 at 0° and

-10°, A., I, 82.

Saslavski, I. I., general characteristics of volume change during reaction in

solutions, A., I, 40.

Saslow, G., delayed heat production of caffeinised frog muscles, A., III, 217. Twitch tension and initial heat in caffeinised frog muscle, A., III, 264.

Sass, J. E., histological and cytological study of ethyl mercury phosphate poisoning in maize seedlings, B., 822.

Sasse, W., Schneider, Ernst, and Buell Combustion Co., heated drum apparatus for desiccating liquids and semi-liquids, (P.), B., 740.

Sassi, A. V., Florentine, N., and Migliaro, J. C., alcohol vinegars; iodine value, B., 77.

Sassier, R., application of retarding action of cold on blood-coagulation to determination of fibrin, A., III, 249.

Sassmann, H. See Abel, E.

Sastri, B. N., and Krishnamurthi, A., fractionation of starch, B., 828.

and Sreenivasaya, M., conductometric determination of enzyme activity, A., III, 29.

See also Ranganathan, V.

Sata, N., and Niwase, Y., colloidal systems of three liquid components. II. Benzene-water-methyl alcohol and carbon tetrachloride - water - methyl alcohol, A., I, 238.

and Watanabe, Sei-ichi, influence of ultrasonic waves on colloid solubility of metal hydroxides. II., A.,

I, 238.

Satake, S., corrosive action of sulphur on copper during vulcanisation, B., 372. Purification of natural rubbers. III. Formula for calculation of non-volatile, water-soluble substances in coagulated rubber, and its applications, B., 702.

Satchwell, L., thermostats [for electric ovens], (P.), B., 150. Thermostats, (P.), B., 302.

Sathe, N. R. See Limaye, D. B.

Sato, G., liberation of iodine from iodised fat in the animal body and its relationship to intermediary fat metabolism, A., III, 18.

Satô, H., reducing reactions of stannite. A., I, 576.

Sato, Masayoshi, and Murata, Kiichi,

micro-determination of potassium and sodium in milk, A., III, 253.

Sato, Mitsuru, energy states of valency electrons in metals. I (3). Stationary states of valency electrons in zinc crystal. I. (4). Nature of electrode potentials and mechanism of catalytic action of metal surface. I. (5). Threshold value of overvoltage of hydrogen on zinc elcctrodo, A., I, 159, 414.

Satô, Mizuho, Sommerfeld and Frenkel electron theories of metals, A., I, 404. Sato, S., Zeeman effect of the cadmium

lines $5^3P_{0,1,2}$ - 6^3S_1 , A., I, 157. Sato, Takeo, effect of vegetative nerve poisons on intermediate carbohydrate metabolism of the liver. I. Sympa-II. Parasympathetic thetic poisons. poisons, A., III, 135.

Sato, Tomoo, and Nishigori, S., formation of the graphite eutectic in the iron-

carbon alloy, A., I, 297.

Satch, S., heat of formation and specific heat of aluminium carbide, A., I. 566. Heat of formation and specific heat of silicon nitride, A., I, 619.

Satterfield, G. H. See Dann, W. J., and Holmes, A. D.

Satterly, J., latent heat of evaporation of liquid helium, A., I, 230. Physical properties of solid and liquid helium, A., **1**, 230.

Sattig, P., [flexible-board] roof coverings, (P.), B., 350.

Sattler, F. (Giessen), biology of Thielavia basicola (B. et Br.), Zopf., B., 823. Sattler, Franz, self-lubricating mechanical

bodies, (P.), B., 857, 1290.

Sattler, \hat{H} . See Lange, E.

Sattler, L., and Zerban, F. W., determination of ash [conductometrically] in cane molasses, B., 380.

See also Zerban, F. W. Satyanarayana, P. See Ramiah, P. V. Saubert, G. G. P. See De Jong, H. G. B. Sauer, E., and Ruppert, W., influence of

hydrophilic colloids on base exchange in silicates, A., I, 133. and Sanzenbacher, $K_{\cdot \cdot}$, pectin as protective

colloid, A., I, 305. and Schneider, R., colloid-chemical prob-

lems in deep-boring technique, B., 1.

Sauer, H., sedimentograph, B., 1142. Dimensions of the farinograph, B., 1260. See also Gründer, W., and Voss, W.

Sauer, J., and Adkins, H., selective hydrogenation of unsaturated esters to unsaturated alcohols, A., II, 82.

Sauer, L. See Kamptner, H.

Sauer, O., textile fabrics [laces and lace

curtains], (P.), B., 1325.
Sauerbier, R. See Langenbeck, W.
Sauerlandt, W., stall manure, B., 71. Examination and evaluation of organic

manures, B., 708. Sauermann, G., highly refractory building materials, B., 1052. Saunders, D. H. See Mosher, W. A.

Saunders, F., Finkle, I. I., Sternfeld, L., and Koser, S. A., properties of an essential growth factor for pathogenic bacteria, A., III, 144. See also O'Hara, L. P., and Vennesland, B.

Saunders, F. J., and Cole, H. H., age and ovarian response to gonadotropic hormone from the mare in the immature rat, A., III, 39. Means of augmenting the ovarian response to gonadotropic substances, A., III, 39. See also Kleiber, M.

Saunders, G. P., Matheson, K. J., and Burkey, L. A., curd tension of milk and its relationship to firmness of curd in cheesemaking, B., 1120.

See also Wilster, G. H. Saunders, H. F., and Sherwin-Williams Co., calcium-base lithopone, (P.), B., 947.

Saunders, J. A., action of monohydric alcohols on gelatin gels, A., I, 461. See also Sweek, W. O.

Saunders, K. H. See Imperial Chem. Industries.

Saunders, S. L. M., [synthetic resin] lacquers, (P.), B., 1090.
Saunderson, W. R., and Cairns, H., control

of gooseberry rust, B., 959.

Saur, E., influence of chemical combination on form of the La line of copper and nickel, A., I, 56. Sauser-Hall, P. See Zimmet, D.

Sauter, E., highly polymerised compounds. CLI. and CLII. Röntgenography and morphology of cellulose. determination of structure of macromolecular lattice of native cellulose. Crystalline and ultracrystalline fibrillar structure of cellulose, A., I, 226. CLXIV. Unit cell diagrams and microstructure of "single crystals" of rubber; determination of the macromolecular lattice of rubber by new X-ray methods. CLXXIV. Rotating goniometer fibre diagram; polymorphism of native cellulose and cellulose hydrate. I., A., I, 226, 555, 604. Crystal structure of cellulose, A., I, 554. Synthetic [resinous] organic industrial materials, B., 368.

Sauter, L. H., air protection in industry, B., 504.

Sauter, V., and Klonnek, F., porous consolidated products of metal and metal carbides, (P.), B., 148. Forming and consolidating process for metals and metal carbides, (P.), B., 252.

Sauter, W. See Dieterle, H.

Savage, G. M. See Halvorson, H. O.
Savard, J., De Hemptinne, M., and
Capron, P., ionisation potential of carbon monoxide, A., I, 170.

See also Clément, H., and De Hemptinne, M.

Savell, W. L., designing a plant for bleach-

ing sulphite pulp, B., 894. and Mathieson Alkali Works, chemical manufacture [viscosc artificial silk],

(P.), B., 1192. Savella, H. S., feeding of chicks, B., 284. Savelli, R., development and adaptation of plastids, A., III, 157. Reducing power of plant tissues, A., III, 158.

Savelsberg, W. See Grothe, H.

Savencu, S., Stratford plant in the Rumanian petroleum industry, B., 869. Savenkov, S. V. See Schorigin, P. P.

Saviano, M., phosphatase in adipose tissue, A., III, 270.

and Tangari, C., biochemical observations in a case of progressive ossifying myositis, before and after parathyroidectomy, A., III, 257.

Savignoni, F., influence of pregnancy hormone on development of epithelial

tumours, A., III, 58.

Saville, F. C., "Blacher method" for determining hardness in waters, B., 192. Savino, E., rat extermination, B., 397.

Savitzki, A. J., thyroxine from quinol monomethyl ether and 3:4:5-tri-iodonitrobenzene, A., II, 419.

Savjalov, I. N., flow and structural properties of sodium silicate solutions, A., I, 177. Savornin, J., experimental study of distant diffraction, A., I, 503. Theory of

distant diffraction, A., I, 503.

Savostianov. Sec Zamislov, A. D. Savron, E. S., Karlson, M. E., and Uschakova, A. S., influence of physical exercise on metabolism of adolescents, A., III, 16.

Savtschenko, N. S., specific dynamic action of food during rest and physical labour. I. Action of a carbohydrate breakfast,

A., III, 465.

Savtschenko, P. S., phosphate method of determination of magnesium, A., I, 149. Savtschuk, S. I., optimum temperature of condensation of the methane fraction of coal gas, B., 8. Savvina, V., water-glass soap, B., 365.

Sawai, I., and Inoue, S., density of limesoda-silica glasses at high temperatures. I., B., 1204.

and Kubo, I., softening of glasses at high temperatures, B., 545. Ruby glass containing copper, B., 780. Deformation of glass in various gases at high temperatures, B., 911.

Sawatari, M., influence of original composition on the micas in metamorphic rocks of the Hsienshuissu series, near Mt. Tahoshang, S. Manchuria, A., I, 382.

Saweris, Z. See Bangham, D. H. Sawicki, J. See Chrzaszcz, T.

Sawlewicz, J., new thiophen derivative, A., II, 72.

and Reichstein, T., Δ^4 -3:12-diketocholenic acid and its attempted transformation into 3:12-diketoallocholanic acid, A., II, 499. Degradation of lithocholic acid to ætiolithocholic acid, A., II, 500.

Sawtell, J. W. See Bowen, E. J. Sawyer, R. A. See Benson, A., and Vincent, H. B.

Sawyer, S. D. See Larson, H. W. Sax, M. G. See Leibson, R. G. Saxe, W. E., material separation, (P.), B.,

632. Material separator, (P.), B., 632. Saxl, I. J., application of chain weight loading to determination of jelly strength, A., I, 134. Determination of frequency distribution characteristics with a photo-electric integrator, A., I, 480. Colour deviation in piece-dyed rayon fabrics, B.,

Saxton, B., and Waters, G. W., ionisation constant of a-crotonic acid at 25° from conductance measurements, A., I, 411. Saxton, J. A. See Thomson, G. P.

Sayce, L. A., kinetics of reaction between oxygen and sulphur. II. Frigescent oxidation of sulphur, A., I, 367.

Sayers, W., and Link-Belt Co., settling

tank, (P.), B., 1140. Sayler, J. N., X-ray ionisation chamber materials, A., I, 171.

Sayles Finishing Plants, Inc., thermoadhesive textile fabrics, (P.), B., 433. See also Ariente, P.J.

Saylor, C. P. See Smith, W. H.

Saylor, J. H., partial pressures of hydrogen chloride from benzene solutions at 30°, A., I, 561.

Saylor, J. H. See also Rintelen, J. C., jun., and Vosburgh, W. C.

Sayre, J. D., and Morris, V. H., concentrations of mineral nutrients in maize as affected by fertiliser treatment, B., 822.

Saywell, L. G., large-scale clarification of wines, B., 383. Wine and vinegar clarification, (P.), B., 720.

and Cunningham, B. B., determination of iron; colorimetric o-phenanthroline method, A., I, 199.

See also Byrne, J., and Cunningham, B. B.

Sazama, R. F. See Steiner, L. F. Sazonov, N. I., experimental results of a

subterranean gasification of coals, B., 102. Sborgi, U. [with Rabaglia, E.], researches on chemical kinetics by means of photo-clectric colorimetry, A., I, 266. and Galanti, A., chemical and physico-

chemical investigations of the mineral waters of the Perla (Piza), A., I, 584. Galanti, A., and Contini, Z., chemical

and physico-chemical analysis of mineral water of Fontovivo (Parma), A., I, 203.

Scaccabarozzi, G. Seo Monselise, G. G. Scagliarini, G., Gmclin's reaction, A., I, 95. Colour reaction between nitroprusside and sulphites (Bödeker's reaction), A., I, 260. Colour reaction between nitroprusside and cysteine, A., II, 180. Action of nitroprusside on pyrroles, A., II, 207.

and Avoni, G., colour reaction between nitroprussido and glutathione, A., II, 139.

Scaife, C. W. See Clark, C. H. D. Scalone, I., coagulability of blood from site of surgical lesions, A., III, 453.

Scandellari, G. See Rossi, G.

Scandola, L. See Bernardi, A.
Scanlan, J. T., and Melin, C. G., basic
fuchsin suitable for the Foulgen technique, A., III, 108. Scaramelli, G. See Bonino, G. B.

Scarborough, E. M., effect of thyroid feed-

ing on nembutal poisoning, A., III, 136.
Scarborough, H. See Drumm, P. J.,
Dunlop, D. M., and Stewart, C. P.
Scarff, R. W. See Dodds, E. C.

Scarpa, O., specifications of the C.E.I. regarding the normal values of the resistance of aluminium used for conductors, B., 1362.

Scarrow, J. A., determination of m.p. of fats and waxes, B., 57.

Scarth, G. W., and Levitt, J., frost-hardening mechanism of plant cells, A., III, 235. Scarzi, L. See Mezzadroli, G.

Scatchard, G., change of volume on mixing and equations for non-electrolyte mix-

tures, A., I, 126. Scattergood, A., making crystal lattice and unit cell models, A., I, 287.

Scatterty, L. E. See Parker, G. H. Scattola, (Signa.) M. See Ciocca, B.

Scevola, E. See Crippa, G. B.

Schaaf, A. E., Walton, G. M., and Air-Maze Corp., air-filter means, (P.), B.,

Schaaf, F., and Obtulowicz, M., lipin metabolism and psoriasis; determination of individual lipin fractions in fasting and fat-charged serum of psoriatic and

non-psoriatic persons, A., III, 462. and Robert, P., antigen content of fil-trates of cultures of Staphylococcus aureus; (analysis by the Schultz-Dale method), A., III, 414.

Schaaffs, W., velocity of sound in solutions and its relation to velocity of sound in the solutes, A., I, 404.

Schaal, R. B., cast-iron structure changes during firing cycle of vitreous enamelling, B., 1348.

Schabad, L., experimental production of malignant tumours by a benzene extract of cancerous liver; endogenous carcinogenic substances, A., III, 122.

Schacher, J., Browne, J. S. L., and Selye, H., effect of sterols on the thymus in adrenal-

ectomised rats, A., III, 436.

Schacherl, F., reduction of zinc oxide with hydrogen, A., I, 194. Use of chemi-luminescence of phosphorus in gas analysis, A., I, 198.

See also Perpérot, H.

Schachkeldian, A. B., colorimetry of iron and its application to the analysis of phosphorites and apatites, A., I, 98. Stability of complex compounds of iron and method of detecting iron in a complex ion, A., I, 98. Detection of ferrous iron in presence of ferro-cyanide, A., I, 150. Detection and climination of titration errors. I., A., I, 578.

and Ambrojii, M. N., corrosion of lead-sodium alloys, B., 145.

and Fischer, F. K., use of copper electrodes in electro-analysis, A., I. 98

Schachnazarova, E. M. See Zelinski, N. D.Schachno, A. P., and Podsharskaja, D. A., changes in coal on drying, B., 101. Mechanisation of preparing coal samples, B., 404.

Schachov, A. S., adsorptive properties of iron hydroxide, A., I, 178. Kinetics of the substitution of copper and iron by metallic zinc in chloride solutions, A., I, 250.

See also Tschishikov, D. M. Schachowskoy, T. See Elöd, E.

Schaeht, A., vacuum [drying plant] in heat technology, B., 735.

Schacht, E. C., and Behr-Manning Corp., coating [a earrier with abrasive], (P.), B., 39. Abrasive articles, (P.), B., 39. Abrasive material, (P.), B., 39.

Schacht, R. See Hilpert, R. S.

Schachter, B., and Marrian, G. F., conjugated cestrogens in urine of pregnant mares, A., III, 150.

Schachtschabel, P., intake of non-exchangeable potash by plants, B., 707.

Schade, R., increase of spark potential by irradiation, A., I, 55. Characteristics of the Townsend current and influence of illumination on the starting voltage of a glow discharge, A., I, 337. Lowering of spark potential of the inert gases by

irradiation, A., I, 486.
Schadrina, S. I. See Artamonov, N. S.
Schaechterle, P. See Consolidirte Alkali-

werke.

Schaefer, A. (Bonn). See Dilthey, W. Schäfer, A. (Saxony), vitamin-C and antithyroidic action, A., III, 325.

Schaefer, Alex, replacement of tin solders by other soft solders, B., 449. Cadmiumzinc solders, B., 923.

Schäfer, G. See Kuhn, A.

Schaefer, Hans, lacquering of printed surfaces, (P.), B., 264. See also Rajewsky, B.

Schäfer, Harald, qualitative analyses and colorimetric estimates with the aid of Jena glass drop test plate, A., I, 536.

Schäfer, K., second virial coefficient of different modifications of light and heavy hydrogen. I. Experimental determination, A., I, 453.

and Conrad, R., mass-spectrographic examination of nitrogen hydrides, A.,

I, 591.

Schaefer, M., oxidation products in crude trinitrotoluene; lead salts of di- and tri-nitrobenzoic or hydroxybenzoic acids, B., 1168.

Schaefer, R.A. See Hovorka, F.Schaefer, V. J. See Langmuir, I.

Schaefer, W., naphthenic acids from redistillation asphalt, B., 867.

Schaefer, Werner, and Sandor, G., antigens of anthrax bacteria, A., III, 294.

Schaefer, Wilhelm, regeneration of mineral oil bleaching earths, B., 1297. and Thomas, M., use of fuller's earth for

softening brewing liquor, B., 966. Schäfer, Willy. Sec Leitz, Ges.m.b.H., E.

Schaeffer, W. See Harteck, P.

Schäffner, A., enzymes of fermentation. VII. Phosphorylation of hexoses by yeast extracts, A., III, 394.

Schaffer, C. J. See Hatfield, J. E. Schaffer, E. J. See Theis, E. R.

Schaffer, R.J., Wallace, J., and Garwood, F., centrifuge method of investigating variation of hydrostatic pressure with water content in porous materials, B., 851.

Schafmeister, P., spatial arrangement of graphite in cast iron, B., 445. Grainboundary corrosion and structure etching of 18:8 chromium-nickel steel, B., 1215.

and Braun, H., constructional precautions for prevention of corrosion in chemical plant, B., 195.

and Moll, G., use of polarised light in examination of structure of iron and steel, B., 350.

Schafranovski, I. I., distribution of angular values in crystals, A., I, 349.

Schaile, O. See Trendelenburg, R.

Schairer, J. F., and Bowen, N. L., pseudowellastonite and wellastonite solid solutions with diopside and akermanite, A., I, 384.

Schakin, A. N. See Kurbatova, V. S.

Schalberov, N. A., and Ostroumov, N. M., surface of liquid in the phase diagram, and thermal expansion and viscosity of alcohol-water solutions of lithium chloride. II., A., I, 126.

Schales, O., γ -chloro- β -methyl- A^a -propene, A., II, 81. Water-soluble c-hæmin from blood. II. Chromotographic enrichment of c-hæmin and its behaviour when deprived of iron, A., III, 411.

See also Barkan, G. Schalfeev, V. M., and Bezzabotnikova, A. P., electro-analytic determination of copper without the use of platinum

electrodes, A., I, 328. and Katzin, M. M., acid-stability of

plastic compounds for accumulators, based on coal-tar pitch and hydroxy-naphthenic acids, B., 698.

Schalit, S. S. See Schnbnikov, L. V.

Schall, A. See Raub, E.
Schall, J., "Descha" boiling procedure for soap bases and curd soaps, B., 462.

Schallbroch, H., testing the machinability of light metals, B., 797.

Schaller, W. T., origin of kernite and borax in the Kramer borate field, California, A., I, 384. Chemical composition of sepiolite (meerschaum), A., I, 434.

ller, W. T., crystallography of valentinite (Sb₂O₃) and andorite (?) Schaller, (2PbS,Ag₂S,3Sb₂S₃) from Oregon, A., I, 434.

See also Hewett, D. F.

Schallreuter, W. L. W., electrodes of [hotcathode] electric-discharge tubes, (P.), B., 363.

Schalm, O. W., and Beach, J. R., cultural requirements of the fowl-coryza bacillus, A., III, 226.

Schamarin, A. See Kornfeld, M.

Schamovski, L. M., photographic elementary process in ionic crystals, A., I, 11. Schamrai, F. I., and Saldau, P. J., equi-

librium diagram of the system magnesium-lithium, A., I, 558.
Schamsiev, A. See Zaprometov, V. G.
Schanderl, H. See Mann, M.

Schantarovitsch, P. S., kinetics of oxidation of hydrides in the gaseous phase. II. Oxidation of phosphine, A., I, 248. See also Jakovlev, B.

Schapelle, N. A., effect of narrow ranges of wave-lengths of radiant energy and other factors on reproductive growth of long-day and short-day plants, A., III, 48. Schapiro, E. O. See Oparin, A. I.

Schapiro, M. J. See Burkser, E. S., and Lopatto, E. K.

Schaposchnikov, I., Dirac vector model for two non-equivalent electrons in the atom, A., I, 109.

Schaposchnikov, N. A., rapid determination of creep [of steel], B., 446.

Scharf, J. J., Strommer, L. T., and Libber-Owens-Ford Glass Co., tunnel kiln, (P.), B., 1053.

Scharinger, W., cytological studies on flowers of Ranunculacee, A., III, 245. Scharles, F. H., Baker, M. D., and Salter, W. T., glycolysis of various substrates by extracts of sarcoma and muscle, A., IĬI, 142.

Scharmann, W. G. See Gregory, L. B. Scharova, A. K. See Aglitzki, V. A.

Scharrer, E., and Gaupp, R., relation between the thyroid and the diencephalic gland, A., III, 187.

Scharrer, K., and Schropp, W., effect of follicular hormone on growth of culture plants, A., III, 242. Effect of copper ions on development and composition of oats, B., 71. Action [on plants] of boron, alone and in combination with iodine, in fertilisers, B., 271. Effect of silicic acid, boron, and other trace-elements on growth of peas, broad beans, and soya beans, B., 273. Effect of strontium and barium ions on growth of certain plants, B., 1102.

Schartum-Hansen, H., hamoglobin determination by hæmatocrit; indirect hæmoglobin determination, A., III, 110.

Scharwächter, W., scattering of X-rays at the conductivity electrons of beryllium, A., I, 224.

Schaterkina, Z. F. See Vladimirov, L. V. Schattaneck, E., device for aerating fer-

mentation liquids, (P.), B., 721. Schattenstein, A. I., acid catalysis in liquid ammonia. II. Kinetics of ammonolysis of desmotroposantonin and diethyl tartrate in liquid ammonia in presence of ammonium salts, A., I, 191, 251. Liquid ammonia as a protophilic solvent, A., I, 242. Solutions in liquefied gases. XVI. Kinetics of the ammonolysis of desmotroposantonin and of ethyl tartrate in liquid ammonia in presence of ammonium salts, A., I, 250.

Schaub, C. M., [ferrous metal] welding

electrode, (P.), B., 581. Schauberger, O., occurrence of photosensitive yellow rock-salt in Hall Salzberg, A., I, 434.

Schaum, K., [photographic] nuclei, B., 90. and Becker, A., ultramicroscopic observations with photo-sensitive crystals. III. Thermal processes in crystals, A.,

and Scheld, O., ultramicroscopic observations with photo-sensitive crystals. IV., A., I, 330.

Schavrigin, A. I., racemisation in the camphene rearrangement, A., II, 67. tert. Propylfenchyl alcohol, A., II, 68. See also Nametkin, S. S.

Schdanov, H. S. See Lirmann, J. V. Schebalin, K. N., and Michelson, E. M., extraction of sulphur from coke-oven gas and obtaining it in elementary form by a method similar to the "Thylox" method, B., 864.

Schechter, A., mechanism of action of nitrogen on steels, A., I, 42.

See also Motschan, I., and Roginski, S.

Schechter, H. J. See Brian, E. W. Scheda, B., and Stolpp, T., rapid determination of attenuation limit of wort and beer, B., 1395.

Scheeben, K., determining pitch content of [fuel] briquettes, B., 311.

Scheel, K. C. See Meppen, B.

Schéele, C. von, content of bound starch as method for judging efficiency of disintegration [of potatoes], B., 1256.

Afzelius, I., and Leander, K., determination of p_H value of potato starch and its relation to titratable acidity, B., 965.

Svensson, G., and Rasmusson, J., determination of starch content and dry matter of potatoes by means of their

sp. gr., B., 81. Scheele, W., determination of humic acid in material containing humus, B., 705. and Steinke, L., humic acids. IV., B.,

Scheepers, L., use of thermocouples, B., 95. Effect of rate of heating on softening temperature of refractory material under constant load, B., 241.

Scheer, A. F. van der. See Burg, B. van der. Scheer, P. See Strauss, L. H.

Scheff, G., and Csillag, Z., relation of some iodine-binding substances (glutathione, ascorbic acid) to the carbohydrate economy in trypanosome infection; intermediary regulation of metabolism, A., III, 15.

and Hasskó, A., effect of some chemotherapeutics on metabolism of trypanosomes in reference to interference phenomena, A., III, 485.

Scheff, G. J. See Daniel, E.

Scheff-Pfeifer, I. See Alwall, N. Scheffer, F., and Nagel, W., phosphoric

acid as fertiliser, B., 165. and Zöberlein, H., best methods of pre-paring and handling stall manure, B.,

1385.Scheffer, J. C. See Kreveld, A. van.

Scheffer, T. C., relation of temperature and time to carbon dioxide production and growth in continuously aërated maltagar cultures of Polystictus versicolor, A., III, 105. Progressive effects of Polyporus versicolor on physical and chemical properties of redgum sapwood, B., 141.

Scheib, B. J. See Guthrie, E. S., and Stark, C. N.

Scheibe, G., variation of absorption spectra of substances in solution, and subsidiary valency as the cause of it, A., I, 216.

Kandler, L., and Ecker, H., polymerisation and polymeric adsorption as the cause of new types of absorption bands of organic dyes, A., I, 165.

Mareis, A., and Ecker, H., reversible polymerisation as a cause of new types of absorption bands. III., A., I, 494.

Scheibe, R., determining the mixing ratio of cement and additions in old cement mortar and concrete, B., 552.

Scheiber, J., fatty materials as media for paints and their substitution, B., 467. [Natural] oils as paint and varnish media and their substitutes, B., 1238. and Barthel, R., mechanism of hardening of phenol-aldehyde resins, B., 61.

and Seebach, F., differentiation between phenol-formaldehyde resins produced by acidic and basic condensation, B., 809.

Scheiding, E. See Herzog, A. Scheifele, B., lacquering of wood, B., 370. Space-structure of oil molecules, polymerisation, and film formation, B., 1082. Topical structure of oil molecules, polymerisation and film formation, B., 1087. Use of marine-animal oils in varnish. I. Origin, production, and general properties, B., 1088.

Scheil, E_{\cdot} , development of measuring methods in metallurgy, B., 354. Scaling of metals and alloys [at high

temperatures], B., 1217.

and Thiele, W., changes in mechanical stresses [in steel] in the austenitemartensite transformation, B., 1213.

and Verein Stahlwerke A .- G., chromiumaluminium steel for articles exposed to high temperatures, (P.), B., 800.

and Wurst, H., statistical investigation of structure [of metals]. II. Measurement of volume of crystals, A., I, 117. Reaction of iron with molten zinc, B., 1214.

See also Forster, F., and Schnell, R. Scheil, M. A. See Hoyt, S. L. Schein, A. V., determination of ferrous

oxide in chromite, B., 1045.

Schein, M., and Katz, M. L., ultra-violet luminescence of sodium chloride, A., I, 10. Scheinker, N. S., hydration of dyes and change of their dispersity in presence of salts, A., I, 133. Apparatus for diffusion measurements, A., I, 203. Scheinman, R. D., and Jurovski, A. Z.,

rapid determination of nitrogen in coal,

B., 744.

Scheithauer, use of union vistra-cotton or -flax fabrics for clothing, B., 533.

Scheltlin, E., organic mercury compound, (P.), B., 621.

Schelaumova, A. See Medvedev, G.

Scheld, O. See Schaum, K.

Schell, C. See Guillemet, R. Schell, H. See Sessous, G.

Schellenberg, H. See Ruzicka, L. Schellenger, N. C., Haselwood, W. E., and Chicago Telephone Supply resistance element, (P.), B., 1230.

Schellens, E. L., and Shellwood-Johnson Co., porous metal body, (P.), B., 1228. Scheller, E. See Du Pont de Nemours & Co., E. L.

Schelling, V. See Hartman, F. W. Schelnz, H. E. See Beddoes, H.

Schelz, H. See Grassmann, W. Schemaev, A. M., metal-vapour lamps, B., 254.

Schemel, R., and Clodius, S., home-produced [German] materials for water-

pipe construction, B., 505. Scheminzky, Fe., and Scheminzky, Fr., effect of galvanic current on the envelopes

of cells, A., III, 473.

Scheminzky, Fr. Sce Scheminzky, Fe. Schemjakin, F. M., periodic reactions, A., I, 87, 246. Multiple emulsions and spontaneous formation of emulsion systems, A., I, 182. Colour reactions of rare earths with alkaloids. III., A., I, 263. Emission wave theory of periodic reactions. VII., A., I, 359. Reactions of rare earths and allied elements with pyrogallol, gallic acid, and morphine, A., I, 477.

Adamovitsch, V. V., and Pavlova, N. P., gravimetric determination of vanadium and uranium by means of ammonium benzoate and salts of other organic

acids, A., I, 200.

and Lazareva, A. I., magnesium hydroxide formation in gelatin, A., I, 183. Periodic precipitation of barium carbonate, copper chromate, and silver sulphate in aqueous media in capillaries, A., I, 359. Comparison of periodic precipitation in aqueous media by the Morse and Ostwald methods, A., I, 359.

Veselova, A.V., and Vladimirova, M.I., colorimetric determination of tung-

sten and cerium, A., I, 200.

and Volkova, V. A., potentiometric titration of cerium, lanthanum, and thorium, as ferrocyanides, A., I, 477. See also Gindin, L. G.

Schemmerhorn, L. G. See Tiedjens, V. A. Schenck, F., crystalline vitamin-D₃, A., III, 234.

Buchholz, K., and Wiese, O., 7-dehydro-

cholesterol, A., II, 59.
Schenck, G., and Graf, H., lactucarium.
I. and II., A., II, 109; III, 66.
Determination of Chelidonium alkaloids. I. and II., A., III, 191; B., 618. See also Späth, E.

Schenck, M., bile acids. " β-acid " I. Constitution of the compound $C_{24}H_{34}O_{10}N_{2}$ \mathbf{and} $_{
m the}$ $C_{21}H_{35}O_{11}N_2$ obtained from the "a-acid" by addition of water. II. Determination of nitrogen according to Van Slyke. III. Constitution of the "oxidation product," $C_{21}H_{36}O_{3}N_{2}$. LV. Nitrogenous product obtained from bilianic acid by oxidation with nitric acid; production of cilianie acid by two methods, A., II, 20, 246, 420.

Schenck, R., chemistry of oxygen, A., I, 185. Chemistry of sulphide phosphors, A., I, 320.

and Knepper, W., sulphide ores, B., 1216. Schmahl, N. G., and Meyer, K., firmness of combination of the carbon in carbide alloys, B., 1216.

Schenk, F., and Langecker, H., changes in tissue of the adrenal cortex in rabbits following chronic insulin treatment, A., III, 151.

Schenk, G., fundamentals of metal spraying, B., 575. Metal spraying; comparison with other methods of protecting [metal] surfaces, B., 688.

Schenk, M., protective layers on aluminium

and its alloys, (P.), B., 253.

Schenk, P. W., new absorption spectrum of diatomic sulphur, A., I, 435. Sulphur monoxide. VII. Improved method for preparation, and some properties, of pure sulphur monoxide, A., I, 576. Question of existence of selenium monoxide, A., I, 577. Electrical discharge as an aid in chemical synthesis, A., I, 581.

and Rehaag, H., preparation of phos-

phorus peroxide, A., I, 576. and Triebel, H., sulphur monoxide. VI. Formation of sulphur monoxide in some thermal decomposition reactions, A., I, 41.

See also Platz, H.

Schenkel, H. See Erlenmeyer, H. Schepelov, J. D. See Schubnikov, L. V. Schepilevskaja, N., antiscorbutic activity of dried fruits of the dog rose, A., III, 327. Antiscorbutic activity of dried rose hips, A., III, 327. Antiscorbutic properties of pine needles. VIII. Determination of vitamin-C in pine needle concentrates, A., III, 327.

Scheps, M. See Elmer, A. W. Scheremeteva, V. See Rostovski, E. N.

Scherer, J. H. See Forbes, J. C.

Scherer, M., magneto-optical properties of liquids; application to analysis of hydrocarbons, A., I, 66.

See also Bizette, H. Scherer, P. C., desulphurisation of crude viscose rayon, B., 424.

Scherillo, A., mejonite of Somma-Vesuvius,

A., I, 430. Lava from Demayend (Persia), A., I, 432. Schering-Kahlbaum Akt.-Ges., esters of polycyclic alcohols [sex hormones], (P.), B., 88. Separation of acylatable constituents of a mixture, (P.), B., 117. Derivatives of androstenols, (P.), B., 188. Alkyl and anyl derivatives of phenols, (P.), B., 216. 3:5 Di iodo 4 - hydroxyacetophenone and its derivatives substituted in the hydroxyl group, (P.), B., 218. Seed disinfectant preparations, (P.), B., 274, 378. Alcohols from germinal-gland hormones, (P.), B., 289. [Crystallised keto-derivatives of male sex] hormones, (P.), B., 289. Organic mercury compounds, (P.), B., 393. Separation of hydroxy-compounds of the cyclopentanopolyhydrophenanthrene series. (P.), B., 393. Anodic coating of aluminium and its alloys and electrolytes therefor, (P.), B., 459. Compounds of the cyclopentanopolyhydrophenanthrene series, (P.), B., 498. Reduction of saturated and unsaturated germinal gland hormones containing at least one keto-group, their isomerides, and derivatives, (P.), B., 620. Unsaturated diketones related to the follicle hormone, (P.), B., 620. 17-Hydroxy-3-keto-compounds of the cyclopentanopolyhydrophenanthreno series, (P.), B., 620. Pregnanolones, (P.), B., 620. Di- and tri-iodo-derivatives of acylamino-acids and their salts, (P.), B., 841. Derivatives of 3:17-diols of the cyclopentanopolyhydrophenanthreno series, (P.), B., 980. Unsaturated diketones related to the corpus luteum hormone, (P.), B., 980. Unsaturated neutral stigmasterol oxidation products of compounds, (P.), B., 980.

Schering-Kahlbaum Akt.-Ges., dihydro-follicle hormone, (P.), B., 981. Seed grain immunising agents, (P.), B., 1108. Electroplating of aluminium or its alloys, (P.), B., 1228. Trialkylacetamides with saturated alkyl groups, (P.), B., 1269. Iodised hydroxy-derivatives of 2-phenylquinoline-4-carboxylic acid, (P.), B., 1270. Pregnenediones, (P.), B., 1270. Reduction products derived from dehydroandrosterone, (P.), B., 1270. Tertiary carbinols of the cyclopentanopolyhydrophenanthrene series, (P.), B., 1270. Purification of germinal gland hormones, (P.), B., 1273. [Aluminium or its alloy] cartridge cases, (P.), B., 1280. Stable calcium thiosulphate solutions, (P.), B., 1337. Agents for combating insect pest grain], (P.), B., 1405. trans-Androstoppes and the companion of t sterone and its derivatives, (P.), B., 1408. Reduction products of the cyclopentanopolyhydrophenanthrene series, (P.), B., 1408.

D., tertiary and Claude, alcohols of the cyclopentanopolyhydrophenanthrene series, (P.), B., 1135.

Feldt, A., Schoeller, W., and Allardt, H. G., complex [metal] compounds of organic mercapto-compounds, (P.), B.,

Schoeller, W., and Goebel, H., composition of matter [thyroxine tablet], (P.), B.,

and Williams, W. P., [mono]acyl compounds of polycyclic alcohols of the cyclopentanopolyhydrophenanthrene series, (P.), B., 88.

Scherp, H. W. See Heidelberger, M. Scherrer, P. See Brann, A., and Mercier,

Scherschever, J. M., and Brodski, A. E., refraction in solutions. V. Complete refractivity curve of carbamide, A., I, 65, 295.

See also Sluckaja, M. M.

Schestakov, K. See Jermolenko, N. F.
Schesterikova, T. P. See Gorodetski, E.,
and Rozenfeld, L. E.

Schettle, I., and Kljutschkin, N., esterification of cellulose and hydrato-cellulose. I., B., 24.

Schetty, A. See Kapp, H. Schetty, G. See Fichter, F Scheuch, H. See Müller, W. J.

Scheuer, E., and Schulz, E., influence of rate of solidification and magnesium content on hardness of silumin-gamma, B., 247.

Scheunert, A., importance of flour and bread in meeting vitamin-B requirements, B., 78.

and Brüggemann, J., absorption of iron by ileum-fistula dogs, A., III, 131.

and Rau, S., synergism of vitamins. I. Influence of varying intake of vitamin-A on vitamin- B_1 requirements, A_1 , III, 280.

and Reschke, J., greening of vogetable preserves with reference to their vitamin-C content, B., 1125.

Reschke, J., and Kohlemann, E., vitamin-C content of potatoes. I. Old stored potatoes of the 1935 crop. II. Summer and autumn potatoes of the 1936 crops, A., III, 45; B., 1125. and Schieblich, M., resorption of vitamin-B in the small intestine, A., III,

77.

Scheunert, A., and Schieblich, M., formation of vitamin-C in rats with various nutritional deficiencies, A., III, 282. Rat experiments on determination of vitamin- B_1 ; stability of international $-B_1$ standards, A., III, 325. Vitamin content of wheat and rye and of the meal and bread propared from them, B., 1118.

and Schmidt-Hoensdorf, F., avitaminosis in young beasts of prey, A., III, 152.

Scheuring, H., mechanism of the activation by chloroform of thrombin in plasma and serum. I. Action of chloroform on oxalated plasma. II. Action of chloroform on serum, A., III, 413.

Scheviakova, L. See Rapoport, I. B. Schevliagina, N. K. See Smirnov, P. V. Schevtschenko, E. P., plastometric testing of coal for coking power, B., 998.

Schevtzova, G. See Rudkovski, D. M. Scheygrond, B. See De Fremery, P. Schibaev, S. V. See Plaksin, I. N.

Schichtel, G., and Amer. Magnesium Metals Corp., multiple [magnesium-base] alloys. (P.), B., 801.

Schick, F., mineral oil refining, using selective solvents, particularly phenol, B., 1156.

Schickele, E., and Carr, P. H., electrographic effect [in metal engraving], B., ĭ363.

Schickh, O. von, Binz, A., and Schulz, A., pyridine. XXIII. Derivatives of 3aminopyridine, A., II, 74.

Schicktanz, S. T., separation of constantboiling mixtures of naphthene and paraffin hydrocarbons by distillation

with acetic acid, B., 415. and Etienne, A. D., acid content of whisky: variation with age and dilution, B., 384.

See also Mair, B. J. Schidlo, O., and Pile Lumina Belge, Soc. Anon., [machine for] manufacture of clectrodes for galvanic [drv] cells, (P.), B., 937.

Schidrowitz, P., and Malden, J. W., rubber,

etc., (P.), B., 161. and Redfarn, C. A., expanded chlorinated rubber, B., 1092.

Schieblich, M., cutaneous absorption of vitamins, particularly from vitamincontaining skin creams, A., III, 187. See also Scheunert, A.

Schiedt, B. See Maurer, K.

Schiedt, R., counting α-rays emitted from uranium, A., I, 57. Number of α-particles emitted from uranium, A., I, 160.

Schieltz, N. C. See Clark, G. L.

Schiemann, G., and Baumgarten, H. G Question of an ortho-effect, A., II, 334. hierholz. E. new appearance.

Schierholz, E., new apparatus for technical gas analysis, B., 1295.

Schierz, E. R. See Ojala, V. Schiff, L., and Tahl, T., effects of desiccated hog stomach in achlorhydria, A., III, 11.

Schiff, L. I., inelastic collision of deuteron and deuteron, A., I, 391. Scattering of neutrons by deuterons, A., I, 489. Capture of thermal neutrons by deuterons, A., I, 489.

See also Fisk, J. B., and Morse, P. M. Schiffers, B. See Benrath, A.

Schiffett, C. H. See Lind, S. C. Schifrin, A. See Antopol, W., and Tuchman, L.

Schifrin, M. G., determination of sulphur in coal, B., 513.

See also Zikeev, T. A.

Schikorr, G., atmospheric rusting of iron. II., B., 1212.

Schilaeva, L. V. See Moor, V. G.

Schildwächter, H., determination of methyl alcohol in presence of ethyl alcohol in mixed fuels, B., 1006. Schilinski, A. Soc Brejneva, N.

Schill, W., German and foreign balsam turpentine oil, B., 1407.

Schillak, R. See Chrzaszcz, T.

Schiller, A., absorption measurements of organic dyes in the near infra-red, A., I, 282.

Schilling, E., linseed and fibre flax, B., 1103. Schilling, E. W., and Johnson, H., separation of hæmatite by hysteretic repulsion, B., 678.

Schilling, K. See Strohecker, R.

Schilling, Y., pyramidone, luminal, and similar substances in investigations of agranulocytosis, A., III, 64.

Schilov, E. A., and Kaniaev, N. P., kinotics of the addition of hypochlorous acid to a double linking. I. Hypochlorous acid and crotonic acid, A., I, 35.

Sehilthius, J. J. See Moritz, A. J. L. Schiltz, L. R., and Carter, H. E., synthesis

of serine, A., II, 53. Schilz, P. See Guest, W. W.

Schimanovski, V. See Tumermann, L. A.

B., 967.

Schimko, A. See Martintschenko, I. Schimmel & Co., various [essential oils], B.,

Schimunek, J., Schwab, A., and Tapp, W., effect of feed temperature on manufacture of spirits from low-grade mash,

Schindler, F. See Kürschner, K. Schindler, H., [recovery of] naphthenesulphonic acids [from lubricating oils], B., 518. Composition of acid resins [from mineral oil refining], B., 1156.

Schinman, E. P., taste and odour removal [from water] at South Fallsburg, N.Y., B., 298.

Sehinzel, C., sound records, (P.), B., 732. Schioppa, L., deficiency diet for investig-

ation of vitamin-E, A., III, 80. Schipinov, N. A., adsorption of arsenic

trioxide by clays, A., I, 299. Schipizin, S. A. See Parflanovitsch, I. A.

Schirm, E., briquetting and pressing of feed-material [in Portland cement manufacture], B., 674.

and Dents. Hydrierwerke Akt.-Ges., production of amides of higher aliphatic carboxylic acids, (P.), B., 1174. Schirmer, R. E., metallic treatment of

vitreous materials, (P.), B., 551.

Schischakov, N. A., structures of silica glass, puzzuolanas, and clays by means of electron diffraction, A., I, 400. Standard substances for exact measurements in electron diffraction method, A., I, 502. Free two-dimensional crystals of silicon

pentoxide, A., I, 603. Sehischkin, N. J. See Kobeko, P. P. Schischkin, P. A., measurement of temper-

ature of flowing gases, B., 300.

Schischkin, V. V., Matveitschuk, I. P., and Gecht, I. I., reversibility of potential of a polarisable hydrogen electrode, A., I, 32. See also Ipatiev, V. V., jun.

Schischlovski, A. A., comparison of absorption and fluorescence spectra of anthracene in different states of aggregation, A., I, 343.

Schistel, K. See Grnnert, A. Schitkova, N. See Halapine, I. K.

Schjänberg, E., quantitative kinetic analysis in the alkaline hydrolysis of pentencic esters, A., I, 35. Heats of combustion and refractivity data of pentenoic esters, A., I, 309. Heats of hydrogenation of unsaturated esters, A., I, 413. Rate of alkaline hydrolysis of

pentenoic esters, A., I, 416. Schkotova, S. N., analysis of tin bronze, B., 683. Analysis of slags, B., 1059. Rapid determination of molybdenum in steels, B., 1062. Determination of tin in ferromolybdenum, B., 1063. Determination of oxygen in liquid steel, B., 1214.

Schlachover, M. See Rogovin, S. Schladt, G. J., pyrotechnic composition,

(P.), B., 733.

Schläger, J. See Späth, E.

Schläpfer, P., formation of nitric oxide during the burning of town's gas in burners and combustion chambers, B., 1295.

and Esenwein, P., determination of free lime and calcium hydroxide in cement clinkers, cements, slags, and set hydraulic mortars, B., 1343.

and Rohonczi, G., fundamental thermotechnical considerations of the coking

process, B., 200.

Schlag, A., measurement of velocities in a fluid stream by means of Pitot tubes and

similar apparatus, B., 508.

Schlapp, R., fine structure in the $^3\Sigma$ ground state of the oxygen molecule, and rotational intensity distribution in atmospheric oxygen band, A., I, 207.

Schlapp, W. See Jones, A. M. Schlatterer, R., Zeeman effect of alkali metals according to the Dirac equation, A., I, 53.

Schlayer, C., influence of oxygen tension on respiration of pneumococci (type I), A., III, 226. Influence of oxygen tension on cell metabolism and the mechanism of the action of hydrocyanic acid, A., III, 449.

Schlechtweg, H., magnetic anisotropy of single crystals of iron and nickel, A., I, 69. Influence of mechanical strains on the ferro-magnetic properties of cubic single crystals, X., I, 292.

Schlegel, H. See Höltje, R.

Schleicher, A., principle of process of qualitative analysis, A., I, 424. Émission spectrum analysis as physical method in analytical chemistry, A., I, 528.

and Laurs, L., qualitative micro-analysis by electrolysis and spectrography; precipitation at the mercury electrode,

À., I, 262.

Schleifer, K. M. See Utevski, A. M. Schlemmer, F. See Späth, E.

Schlenk, F., pentosephosphoric acid from cozymase, A., III, 69. Acid hydrolysis of cozymase, A., III, 222. Action of phosphorus oxychloride on cozymase, A., IÎI, 483.

and Euler, H. von, behaviour of cozymase to alkali, A., III, 69. Cozymase, A.,

III, 69.

Euler, H. von, Heiwinkel, H., Gleim, W., and Nyström, H., action of alkali on cozymase, A., III, 270.

and Gleim, W., by-products in preparation of cozymase from yeast, A., III,

See also Albers, H., Euler, H. von, Karrer, P., and Vestin, R.

Schlenker, F. S., non-sugar reducing substances in plant juices, A., III,

See also Smith, J. B.

Schlenker, G., and Mittmann, G., reciprocal differences in Epilobium varieties. IV. Internodal growth and cell extension in E. hirsutum as influenced by synthetic eta-indolylacetic acid, A., III, 241.

Schlenker, H., strength characteristics of German cellulose wools, B., 655.

Schlesinger, H. I. Sec Burg, A. B.

Schlesinger-Konstantinova, M., rapid detection of ozone, A., I, 424.

Schleussner, C., light-sensitive emulsions, (P.), B., 1275

Schlichting, $H_{\cdot,\cdot}$ effect of insulin on course of alimentary hyperglycemia and hyperalcoholæmia curves, A., III, 75.

Sehliessmann, O., and Zänker, K., spectrographic determination of alloying constituents [in steels], B., 921. Spectrographic determination of carbon, silicon, manganese, nickel, chromium, and molybdenum in iron and steel, B., 1212.

Schlitt, J. L., and Air Reduction Co., separation and recovery of krypton and xenon from gascous mixtures containing them, (P.), B., 669. Recovery of krypton and xenon, (P.), B., 669, Ĭ048.

See also Air Reduction Co., and Wilkinson, W.

Schloemann, $E_{\cdot \cdot}$, and Allendörfer, $A_{\cdot \cdot}$, drying prints, B., 292.

Schlötter, M., nickel-plating, (P.), B.,

and Schmellenmeier, H., porosity testing of electrodeposited metals, B., 1359.

See also Geldbach, A., and Glazunov, A. Schloss, W. L., pavement compositions, (P.), B., 1057.

Schlossberg, J. B., Frazier, L. E., and Highland Iron & Steel Co., wrought iron, (P.), B., 689.

Schlossberger, H., chemotherapy of tuber-

culosis, A., III, 258.
Schlosser, F. Sec Ubbelohde, L.
Schlossmann, H. See Blaschko, H.
Schlottmann, F. See Kraut, H.

Schlubach, H. H., and Böe, H., fructose anhydrides. XIX. Constitution of asparagosin, A., II, 486.

and Graefe, G., l-sorbose. II. New acetyl and methyl derivatives of l-sorbose; numerical relationships in the l-sorb-

ose series, A., II, 485. and Knoop, H., fructose anhydrides. XXI. Synthetic difructose anhydrides,

A., II, 485. and Lendzian, H., fructoso anhydrides.

XX. Constitution of asphodelin, A., II, 486.

and Loop, W., constitution of galactogen. I., A., II, 486.

and Pcitzner, H., fructose anhydrides. XVIII. Constitution of triticin, A., II, 369.

Schlüter, R. See Hückel, W., and Neunhoeffer, O.

Schlumbohm, P., cooling system, (P.), B., 991. Method of coohng, (P.), B.,

Schlandt, H. See Craver, L. F. Schlunegger, A. J., ore mill, (P.), B., 3. Schmahl, N.G. See Schenck, M. Schmakova, E. See Popov, N.Schmalenberg, W. See Mierdel, G.

Schmalfuss, H., determination of mol. wt. of lipins, A., III, 168. "Improvement" [refining] of fats, B., 1077.

and Benecke, O., rapid determination of tendency to sputter, B., 612.

Werner, Hans, and Gehrke, A., spoilage of fats and their constituents by heat and light in relation to [industrial] economy and life. I. and II., B., 151, 256.

See also Werner, Hans.

Schmalfuss, K., action of calcium cyanamide and other nitrogenous fertilisers on biological activity of soil, B., 270. Influence of environment and the nourishment of flax plants on degree of saturation of linseed oil, B., 463. Influence of organic and mineral manures on productivity and biological activity of soils, B., 708. Oil formation in flax seed as influenced by environment and the nutrition of the plants, B., 1387.

See also Giesecke, F.

Schmalz, F. D. See Sullivan, B. Schmantzar, M. P. See Urazov, G. G.

Schmeiser, H. See Hüttig, G. F. Schmeiser, K., dependence of energy of bundles of cosmic rays on angle, A., I,

Schmeiss, H. See Kröhnke, F.

Schmeisser, M. See Schwarz, Robert.

Schmeling, F., effect of sulphur and its compounds on mineral oils, B., 407. Schmellenmeier, H. Sec Schlötter, M.

Schmelzer, C., absolute determination of dielectric loss at high frequencies by the condenser-thermometer method, A., I,

Schmelzer, F. J., increase of chromophilic substance in adrenals in chronic carbon monoxide inhalation, A., III, 391.

Schmerda, F. See Lustig, B.
Schmerling, L. See Hurd, C. D., and
Ipatiev, V. N.
Schmid, E., "optical" and "interference"

total reflexion of X-rays. II., A., I,

and Staffelbach, F., specific resistance of tellurium, A., I, 352.

See also Ewald, P. P., and Köster, W.

Schmid, F. See Brecht, W. Schmid, F. (Strasburg), and Riegert, A., ultrafiltration of insulin of varying purity through membranes of graduated porosity, A., III, 362.
Schmid, Fritz, [linseed] oil economy in

white paints, B., 260.

Schmid, G., and Ehret, L., influence of ultrasonic waves on the passivity of metals, A., I, 415. Effect of ultrasonic waves on electrolytic deposition potentials of gases, A., I, 520. and Speidel, H., Leidenfrost protective

vapour layer in evaporation in vacuo,

A., I, 235.
Schmid, H., "catalytically polar" materials, A., I, 523.

[with Muhr, G.], mechanism of diazotis-

ation, A., II, 188. Marchgraber, R., and Dunkl, F., electrolytic conductivity measurements

applied to the thermodynamics of intermediate reactions, A., I, 364. Schmid, M. D., model correlating four

variables, A., Í, 202. Schmid, O. See Ruggli, P. Schmid, R., dissociation energy of carbon

monoxide, A., I, 413.

Schmid, R., Budó, A., and Zemplén, J., Zeeman effect for atmospheric oxygen bands, A., I, 1.

and Gerö, L., red degraded bands of carbon monoxide in the neighbourhood of 2670-3310 A, A., I, 164. Intense emission photographs of a³II $x^{1}\Sigma$ (Cameron) intercombination bands of carbon monoxide with high dispersion, A., I, 164. Limiting curve for dissociation based on band spectra, A., I, 215. Completion of term system for carbon monoxide. I. Vibration terms and rotation constants of the a'. $^3\Sigma^+$ -state. II., A., I, 279, 442. Rotational analysis of the "3A" bands of carbon monoxide, A., I, 392. Energy of dissociation of carbon monoxide, A., I, 442. Structure of a new system of CO bands, A., I, 547.

Gerö, L., and Zemplén, J., scheme of dissociation of the CN molecule, A., I, 494.

See also Gerö, L.

Schmid, W., assay of atropine by the isolated frog's heart, A., III, 65.

Schmidt, A., and Michailovskaja, O., separation in refining [of fats], B., 364.

Schmidt, Adolf, differentiation of vineidentification and charactergars; of Rumanian vinegars, B., isation 830.

Schmidt, Albert, theory of detonation, B., 623.

Schmidt, Alfred, bleaching of cotton with hypochlorites, B., 659.

Schmidt, A. A., technology of vitamins, A., III, 280.

and Toultchinskaia, K. Z., preparation of ascorbic acid, A., III, 496.

Schmidt, A. F. See David, E. Schmidt, A. W., evaluation of motor fuels, B., 205.

Schmidt, C., heat balance of annular kilns,

Schmidt, C. L., and Titanium Pigment Co., titanium pigments, (P.), B., 591.

Schmidt, C.L.A. See Greaves, J.D. Schmidt, C.R. See Beazell, J.M.

Schmidt, E., and Eckert, E., heat radiation from water vapour mixed with nonradiating gases, B., 852.

Schmidt, E. (Halle). See Claus, B. Schmidt, Ernst. See Pelshenke, P. Schmidt, E. G., and Eastland, J. S.,

influence of sucrose ingestion on aminoacid- and urea-nitrogen concentration of the blood, A., III, 248. Influence of glucose injection on amino-acidnitrogen, urea-nitrogen, and hæmoglobin concentration in blood, A., III, 248.

Eastland, J. S., and Burns, J. H., comparison of glucose- and sucrosetolerance tests, A., III, 470. Schmulovitz, M. J., Szczpinski, A., and

Wylie, H. B., phenol and glyoxaline

content of the blood, A., III, 451. Schmidt, E. W., and Maier, W., refractometric studies with a view of distinguishing fodder- and sugar-beets at young seedling stage, B., 480. Schmidt, F. A. F., absolute entropy values

for gases, A., I, 505. Schmidt, F. C., Sottysiak, J., and Kluge, H. D., heats of solution and heats of reaction in liquid ammonia, A., J,

Schmidt, G. See Keesom, W. H.

Schmidt, Gerhard, application of the Pestemer polarisation photometer in photographic absorption spectrophotometry, A., I, 534. See also Pestemer, M.

Schmidt, Gerhard (Ontario), growth-stimulating effect of egg-white: its importance for embryonic development, A., III, 420.

Schmidt, H., analytical balance; sensitivity, weighing, and correction of a set of weights, A., I, 635.

Schmidt, Hans, evaluation of the toxoid of staphylococci, A., III, 454. See also Kindler, K.

Schmidt, Heinrich, hydrogen peroxide, (P.), B., 438.

Schmidt, Hellmuth. See Keppeler, G. Schmidt, Helmut, plasmolysis and permeability [of plant cells], A., III, 234. Schmidt, J., animal fats, B., 1077.

Lauprecht, E., Dschaparidse, D., and Haase, J. W., composition of pasture grasses: yield from a newly established dairy pasturage, B., 1403. Schmidt, K. See Spengler, O.

Schmidt, Karl, heat-transfer coefficient from a tube wall to carbon dioxide in its

critical range, B., 851. Schmidt, K. F., and Bilhuber, Inc., E., tetrazoles of the camphor group and products therefrom [pharmaceuticals], (P.), B., 289.

Schmidt, L. D., dust-prevention treatment of solid fuels, B., 310.

Eider, J. L., and Davis, J. D., oxidation of coal at storage temperatures; effect on carbonising properties, B., 7. Schmidt, Matthias, presence of chitin in

micro-organisms, A., III, 272.

See also Fink, H.

Schmidt, Max, and Legat, H., heat-resistant chromium-manganese steels, B.,

and Wetternik, L., acid-resistance of iron-nickel base alloys, B., 921.

Schmidt, M. T. See Spielman, M. A.
Schmidt, O. (Berlin), increasing gas
velocities and their optimum values in nests of tubes, B., 1286. See also Volmer, M.

Schmidt, O. (Ludwigshafen), "free" and "non-free," "loose" and "bound" valency electrons of carbon in organic substances, A., I, 286.

Schmidt, O. T., colouring matter of red beetroot, A., III, 333.

Schmidt, P. See Adickes, F. Schmidt, P. J., and Platonov, G. P., anabiosis and fish transport without water, A., III, 308.

Schmidt, Richard, use of floeculants in treatment of water supplies, B., 1139.

Schmidt, Rudolf, latest developments in special glasses for lighting technique, B., 670.

Schmidt, T., magnetic moments of atomic nuclei, A., I, 440.

See also Schüler, H. Schmidt, W. See Wiedmann, G. Schmidt, W. G. See Newitt, D. M.

Schmidt, W. I., orientation of crystallites in single [tooth-]enamel prisms, A., I, 351. Crystal orientation in toothenamel, Å., III, 118.

Schmidt-Hebbel, H., and José, R. H., analytical limits [for the characteristics] of maté; determination of caffeine in maté, tea, and coffee, B., 1407. Schmidt-Hoensdorf, F. See Scheunert, A.

Schmidt-Nielsen, Sigval, and Astad, effect on the constants of butter [fat] of feeding a cow with coconut meal [and kohlrabi], B., 388.

and Flood, A., ambergris, B., 391. See also Schmidt-Nielsen, Signe.

Schmidt-Nielsen, Signe, and Schmidt-Nielsen, Sigval, vitamin-D in tunny-liver oil, A., III, 156.

Schmied, H., collection and uses of larch turpentine, B., 155.

Schmied, R. Sce Lottermoser, A.

Schmieden, W., thermal decomposition of propane, B., 20.

Schmitt, F., and Basse, W., effect of bleeding on distribution of ions between erythrocytes and plasma in arterial blood. II., A., III, 249. Utilisation by the organism of various calcium salts administered by mouth, A., III, 262. Effect of various calcium preparations on amount of lead in blood and urine and its relationship to phosphate meta-

bolism in normal [men], A., III, 263.
Schmitt, F. (München). See Souci, S. W.
Schmitt, F. O., and Bear, R. S., optical properties of vertebrate nerve axons as related to fibre size, A., III, 456.

Bear, R. S., and Ponder, E., optical properties of the red cell membrane, A., III, 449.

See also Bartz, J. P., Bear, R. S., Chinn, P., and Fourt, L.

Schmitt, H., electrolytic brightening of aluminium, B., 1223. Schmitt, H. F. See Steinkopf, W.

Schmitt, J. See Dane, (Frl.) E. Schmitt, J. B. See Heal, R. E.

Schmitt, K. Sec Dietrich, K., and Freund,

Hugo.Schmitt, L., use of blast-furnace slag as

liming material [for soils], B., 595. Simplification of Neubauer's seedling method [for determining available soil nutrients] by colorimetric determination of phosphoric acid, B., 1099.

Schmitt, M., vaporisation of hydrocarbons and hydrocarbon mixtures, A., I, 176.

Schmitt, O. H., high-vacuum cut-off, A., I, 202. Vapour-cooled electrodes, A., I,

Schmitt, R., oxidation products in crude trinitrotoluene, B., 1167. Schmitt, W., determination of iodine value,

B., 150. Schmitthenner, F., carbon dioxide as an

industrial antiseptic, B., 1401.

Schmittmann, H. See Bheinboldt, H. Schmitz, A., proteinase of fibrin, A., III,

Schmitz, H., and Kaufert, F., effect of certain nitrogenous compounds on the rate of decay of wood, A., III, 445.

Schmitz-Dumont, O., and Horst, I. ter, [polymeric indoles], A., II, 168.

Thomke, K., and Diebold, H., catalytic polymerisation of ethylenic derivatives, A., II, 141.

Schmölzer, A., testing weather-resistance of building materials by the crystallisation technique, B., 1345.

Schmolke, H., range of validity of Nernst

heat theorem, A., I, 71.

Schmorl, K., weight per hectolitre as standard for evaluation of grain, B.,

Schmuk, A. A., and Charin, A. N., electrolytic separation of iodine from dilute solutions and mineral and petroleum waters, B., 542.

Schmulevitsch, E. Soc Volkova, L. Schmulian, I. See Kogan, A. Schmulovitz, M. J., and Wylie, H. B.,

determination of theelin with diazobonzenesulphonic acid, A., III, 40. Chemical diagnosis of pregnancy by detection of estrin in urine, A., III, 462.

See also Schmidt, E. G.
Schmuschkovitsch, L. S., optical microvibrometer, A., I, 201.
Schmutov, I. I. See Skvortzov, A. A.
Schnabel, R., production of refractories from raw materials heated to extremely

high temperatures, B., 1341. See also Fricke, R.

Schnaiderman, S. J. See Tananaev, N. A.

Sehnecko, O. See Voss, J.

Schnee, L., band plasmolysis of the endo-dermis cells of Cobwa scandens, A., III,

Schnee, M.S. See Tschirkov, S.K. Schneebauer, F. See Enders, C. Schneekloth, W., and Spielvogel, W., investigating glass currents in tank furnaces, B., 438.
Schneerson, B. L., production of sulphuric

acid in process of smoko abatement at electric centralisations, B., 901.

Schnegg, H., changes in biological samples during transport, B., 720.

and Kipphan, H., stabilisation of beer with the "short-time plate-heater Astra" of the Bergedorfer Eisenwerk-A.-G., B., 176.

and Weigand, K., boric acid as germicide for brewery organisms, B., 278.

Schneible, C. B., settling apparatus, (P.), B., 511. Columns for treating gases or vapours with liquids, (P.), B., 1150.

Schneider, A. See Albers, H.

Schneider, Armin. Seo Köster, W.

Schneider, E. Seo Massatsch, C. Schneider, Erich, carotenoids of purple bacteria. III., A., III, 316.

and Widmann, E., hopato-hormonal regulation of vitamin-A metabolism and the ætiology of ostitis deformans, A., III, 43.

Schneider, Ernst. S. A.-G., and Sasse, W. Seo Büttner-Werke

Schneider, Eugen, and Paschke, M., determination of bonding material in moulding sand, B., 688.

Schneider, E. G., effect of foreign molecules on absorption of oxygen in the Schu-mann region, A., I, 157. Cloud chamber study of the ionisation produced by cosmic rays in the neighbourhood of a block of lead, A., I, 545. and O'Bryan, H. M., absorption of ionic

crystals in the ultra-violet, A., I, 217. Schneider, Ferdinand, transformation of l(-)-asparagine into l(-)-serine, A., II, 233. Peptides of aminomalonic acid and

of l(+)- $\alpha\beta$ -diaminopropionic acid, A., II, Schneider, Frank, and Mater, H. L. van,

electrically-heated, thermostaticallycontrolled, constant-temperature device for Pregl carbon and hydrogen determination, A., II, 358.

and Rieman, W., mechanism of co-precipitation of anions by barium sulph-

ate, A., I, 178.

Schneider, G., wood as chemical raw material, B., 735.

and Fritschi, U., esterification of pectin substances. III. Molecular size of pectin substances, A., II, 28.

Schneider, G., and Kittel, W., design of trays for rectifying columns and materials therefor, B., 195.

and Ziervogel, M., esterification of pectin substances. II. Pectin acetate and formate, A., II, 28. Schneider, G. G., and Bock, H., constitution

of pectin substances, A., II, 383.

Bock, H., and Häusser, H., catalytic formation of heterocyclic compounds, A., II, 207.

and Fritschi, U., esterification of pectin substances. IV. Determination of the constitution of pectin esters, A., II, 383.

Schneider, H. See Harreis, F. Schneider, H. G. See Standard Oil Development Co.

Schneider, K. (Berlin-Hermsdorf), high pressures and temperatures in the chemical industry, especially the fat industry, B., 1076.

Schneider, K. (Giessen). See pfciffer, F. Kroll-

Schneider, Kurt, modern oil deacidification, B., 938. Fibre structure and cottonisation, B., 1032.

Schneider, M. See Ullrich, H.
Schneider, O., determination of benzol in wash oil, B., 204.
Schneider, R. See Sauer, E.

Schneider, Walter, and Linden, K., influence of salt baths on creep tests [on steels], B., 920.

Schneider, Wilhelm, Döbling, W., and Cordua, R., mesomerism of 1-hydroxyphenylpyridinium bases, A., II, 429.

and Gramms, G., Grignard reaction with aryl-substituted ac-diketones and its application to the syntheses of benzene

derivatives, A., II, 156.
Schneiderhöhn, P. See Moritz, H.
Schneidewind, R., and White, A. E., properties of fully annealed and heat-

treated malleable irons, B., 1212.
Schnell, R., and Scheil, E., plasticity of non-metallic inclusions in steel, B., 681.

Schnelle, F., and Heiser, F., fertilisation and wheat quality, B., 271.
Schnellen, C. See Kluyver, A. J.
Schneller, E., fog as a destructive agent to buildings and stone, and its importance in agriculture, B., 676. Damage to plaster by flue gas, B., 1345. Schneller, Z. See Kubelka, V.

Schnellhardt, O. F., and Heald, F. D., toxic action on grey mould spores of cleaning mixtures used in spray-residue removal, B., 1107.

Schnetka, M. See Brüning, A. Schnitger, H. See Günther-Schulze, A. Schnitker, M. A., and Levine, S. A., digitalis in body-fluids of digitalised patients, A., III, 386.

Schnohr, E., treatment of urinary infections with calcium mandelate, A., III, 298.

Schnorf, A., determining the excess of oxidising agent in chemically purified water, (P.), B., 850.

Schnorrenberg, W., sources of defects in casting and forging of aluminium and aluminium-alloy ingots, B., 51.

Schnurer, L., effects of inhalation of smoke from common fuels, A., III, 476. Schnurmann, R., size of gas bubbles in

liquids, A., I, 514.
Schnyder, H. See Blom, A. V.
Schober, H. See Ritschl, R.
Sehoch, E. P., extraction of potassium salts from aqueous mixtures, (P.), B., 666.

Schoch-Bodmer, H., physiology of pollen germination in Corylus avellana: pollen and stigma suction force; swelling phenomena of the pollen colloids, A., III, 240. Schockaert, J. A., and Delrue, G., action of

folliculin on vaginal $p_{\rm H}$, $\overline{\rm A}$., III, 40. Schöberl, A., quantitative macro- and micro-determination of sulphur in organic compounds, A., II, 313. Fission of disulphides by alkali. IV. Mode of reaction of tertiary mercaptans and their disulphides, A., II,

and Ludwig, E., fission of the disulphide linking with sodium sulphite and potassium cyanide and colorimetric determination of thiol compounds and disulphides, A., II, 328.

Schoedel, W. See Grosse-Brockhoff, F. Schöller, C., dyeing in presence of Peregal

O and OK, B., 660.

Schoeller, W. See Schering-Kahlbaum A.-G.
Schoeller, W. R., analytical chemistry of tantalum, niobium, and their mineral associates. XXXIII. General summary and results, A., I, 99.

and Lambie, D. A., determination of bismuth as phosphate, A., I, 478.

Schoeller & Bausch, F., safety paper, (P.), B., 431.

Schoen, E. See Steinhaus, W.

Schön, K., anomalous dispersion of excited argon, A., I, 285.

Schoen, M., problems of asymmetry in processes of immunity, A., III, 373. Béraud, P., and Bréchot, P., hydrolysis

of sawdust and fermentation of hydrolysed products. III., B., 174.

and Eras, E., fermentation producing mannitol, A., III, 428.

Schön, V., recovery of benzol from coal gas B., 8.

Schoenauer, W. Sco Erlenmeyer, H. Schönbaum, B. See Weber, K.

Schönberg, A., and Michaelis, R., autoxidation phenomena and valency tautomerism in the indone series, A., II, 103. Formation of nitrones by action of aromatic nitroso-compounds on methylene ketones, A., II, 248. See also Robson, J. M.

Schönberg, F., detection of preserved crustacean meat, B., 1401.

Schönborn, H., determining thermal endurance of glass, B., 136. Influence of the heating bath on the thermal shockresistance of glasses, B., 911.

Schönbrunner, E., injury to heart muscle-by insulin, A., III, 186.

Schöne, E. See Rädeker, W. Schöne, W., [rotary] pressure filter, B., 737. Schoenemann, R., utilisation of carbohydrates by carnivora, A., III, 306. See also Fingerling, G.

Schönfelder, H., bacterial growth and constituents of urine, A., III. 225.

Schönfelder, M., silicic acid content of blood of puppies inhaling quartz dust, A.,. III, 54.

Schönfeldt, N., treatment of drinking water with ozone [at Stockholm water works],. B., 1139.

Schoenheimer, R., and Johnston, C. G., lithocholio acid gallstones from pig's bile, A., III, 417.

and Rittenberg, D., deuterium as indicator in study of intermediary metabolism. IX. Conversion of stearic acid. into palmitio acid in the organism,. A., III, 422. 🐇

Schoenheimer, R., Rittenberg, D., Fox, M., Keston, A. S., and Ratner, S., nitrogen isotope (15N) as a tool in study of intermediary metabolism of nitrogenous compounds, A., III, 423.
Rittenberg, D., and Keston, A. S.,

exchange reaction of organic compounds with D2SO4, A., II, 440. See also Rittenberg, D_{\cdot} , and Shapiro, A_{\cdot}

Schönherr, K. See Röhrig, H. Schönheyder, F. See Dam, H. Schönholzer, G., effects of thyroxino on the storage of protein in the liver, A., III,

Schönlebe, H., histochemical detection of lead in gastro-intestinal tract, A., III,

Schoenmaker, W. H. See Waterman, H. I.

Schönmann, P. See Fichter, F.

Schönol, K. See Wessely, E.

Schoep, A., cuprosklodowskite, A., I, 52. Bituminous earths from the Kahuzi, A., 1, 334.

Schöpf, C., synthesis of natural substances, particularly alkaloids, under physiological conditions and its relationship to the question of the formation of vegetable compounds in the cell, A., II, 526.

Hartmann, Adolf, and Koch, K., molecular compounds with sodium picrate, A., II, 76.

Schöpfer, I. See Wacek, A. von. Schoepfle, C. S., and Truesdail, J. H., reaction between triarylmethyl halides and magnesium phenyl bromide. 9-Phenylxanthyl chloride, A., II, 161.

Schoetzow, R. E. See Bickford, C. F. Schofield, F. H., heterogeneity of steel ingots. VII. Pyrometry; "quick-immersion "methods of measuring the temperature of steel in open-hearth furnaces, В., 1349.

Schofield, H. Z., replacement of Cornwall stone by tale and felspar in a wall-tile body, B., 671. Schofield, J., and Schofield, J. C., un-

shrinkable wool, B., 1040.

Schofield, J. C. See Schofield, J. Schofield, R. K., and Blair, G. W. S., capacity [of liquids] for being spun, A., I, 410. Fundamental mechanical properties of flour dough, B., 832. Relationship between viscosity, elasticity, and plastic strength of a soft material as illustrated by some mechanical properties of flour dough. IV. Separate contributions of gluten and starch, B., 969.

Schofield, T. H., and Phillips, C. E., influence of small amounts of titanium on mechanical properties of some aluminium casting alloys, B., 926.

Phillips, C. E., and Archbutt, S. L., effect of silicon on mechanical properties of 7% copper-aluminium alloy (L 11), B., 1357.

See also Haughton, J. L.

Schogam, S. M. See Boreskov, G. K. Schojchet, S. N., Zaslavski, S. E., and Liberman, I. P., electrolysis of potassium chloride in Siemens-Billiter tanks, B.,

Schol, C. H., apparatus for blowing up liquid slag or melt into a highly porous mass of the character of pumice, (P.),

B., 631. Scholder, R., Apel, A., and Haken, H. L., action of hydrogen phosphide on solutions of nickel salts, A., 1, 322.

Scholefield, F. See Nabar, G. M.

Scholes, S. R. Sco Cole, S. S. Scholl, F. M., and Munch, J. C., taste tests. IV. Relative bitterness, A., III,

Scholl, Roland, Wanks, L., and Dehnert, H., ${\bf ring\ syntheses\ with\ } ang.\hbox{-}{\bf phthaloylanthra}.$ quinones; dibenzoylene - ββ'-benzopyrrole, phenyldibenzpyrenidinequinone, and triphthaloylbenzene, A., II, 34. Scholl, Rudolf. See Fürth, O.

Scholl, W., Davis, R. O. E., Brown, B. E., and Reid, F. R., melamine of possible plant-food value, B., 376.

See also Davis, R. O. E. Scholtis, K. See Zinke, A. Scholz, C. See Miescher, K.

Scholz, $E_{\cdot \cdot}$, extinction of fluorescence of iodine vapour by magnetic fields, A., I,

Scholz, H. A., and U.S. Gypsum Co., cementitious paint and plastic composition, (P.), B., 159. See also Roos, C. K.

Scholz, $K_{\cdot \cdot}$, stoving lacquers prepared from phthalic acid resins, B., 590.

Scholz, W., sensitivity of flax to lime, B., 481.

Schomaker, V., and Brown, D. J., standard quinhydrone electrode, A., I, 153.

Schomburg, R., discrepancies in determining ash in brown coals, B., 101.

Schommer, W. See Dilthey, W. Schonberg, J. R. See Standard Oil Development Co.

Schondorff, E., glazing, engobing, and "smoking" of tiles, B., 913.

Scheng, P., influence on accuracy of sulphur determinations in cast iron, steel, etc., using sulphur-determination apparatus with rubber-tubing gas leads, B., 921.

Schoolnik, M. Sec Sears, H. J.
Schoon, T. See Thiessen, P. A.
Schoonover, I. C., and Jordan, L., silver: its properties and industrial uses, B., 686.

Schoor, G. van. See Homès, M. Schoorl, N., Vlezenbeek's reaction on p-aminophenol derivatives, A., II, 145. Drying of ether, A., II, 396.

Schoorl, P., sodium and chlorine in extrarenal uramia, A., III, 207.

Schopfer, W. H., vitamins and growth factors in plants; action of vegetable extracts on development of Phycomyces, A., III, 49. Effect of synthetic vitamin- B_1 on a micro-organism, A., III, 71. Nitrogen metabolism of a micro-organism from viewpoint of law of allometry, A., III, 272. Action of the components of aneurin on yeasts (Rhodotorula rubra and R. flava), A., III, 432.

and Jung, A., vitamins and growth factors in plants; activity of oxidation products of vitamin- B_1 , A., III, 272. Vegetative culture test for vitamin- B_1 , A., III, 325. Action of degradation products of aneurin on Phycomyces; second growth-factor of Mucoracea, A., III, 485.

Schoppe, R., scattering of X-rays in halogenated benzenes, A., I, 118.

Schopper, E., demonstration of neutrons of ultra-radiation in photographic emulsion, A., I, 491.

Schorger, A. IV., and Burgess Cellulose Co., stereotype mat, (P.), B., 1193. and Shoemaker, M. J., hydroxyalkyl ethers of cellulose, B., 226.

Schorigin, P. P., and Bogatscheva, K. I., synthesis of vanillin by Mottern's method, A., II, 102.

and Chait, E. V., nitration of cellulose by nitric acid and nitrogen peroxide,

B., 424.

Losev, I. P., and Korschak, V. V., condensation of methylene chloride with phenols. II., A., II, 188. Condensation of dichloromethane with phenols, B., 154.

and Makarova-Semljanskaja, N. N., decomposition of ethers and esters of cellulose with sodium in liquid am-

monia, A., II, 278.

and Rimaschevskaja, J. A., hydroxy-ethyl ethers of cellulose. II. Higher ethers. III. Hydroxyethyl ethers of low degree of etherification, A., II, 88; B., 24.

and Savenkov, S. V., hydrocarbon fraction of fusel oil residues, B., 115.

Simanovskaja, A. A., and Vereschtschagina, N. G., separation of mixtures of cresols (isolation of m-cresol), B., 116.

and Skoblinskaja, S. A., introduction of the chloromethyl group into o-nitro-anisole and toluene, A., II, 97. Decomposition of ethers with sodium in liquid ammonia, A., II, 288.

Veitzman, A.E., and Makarova-Semljanskaja, N. N., triphenylmethyl ether of

cellulose, A., II, 232.

Schorina, E. D. See Ivanovski, F. P. Schormüller, J., adsorption of dyes by meat proteins, B., 1125. Fish protein, B., 1125.

See also Beck, K.

Schorstein, H., conductometric examination of reactions of the fluorine ion and its use in soil problems, B., 705.

See also Blanck, E.

Schossberger, F., and Clews, C. J. B., "higher orientation" with stretched rubber, B., 1245.

and Schwarz, K., electron refraction camera with observation microscope adjustable in a vacuum, A., I, 379. See also Kratky, O.

Schott, H. F. See Ball, H. A., and Samuels, $L.\ T.$

Schott & Co., electric heating resistances, (P.), B., 583.

Schottky, IV., relationship between corpuscular and thermal oscillations in electron tubes, A., I, 56. Experiments on theory of electron emission under influence of strong fields, A., 1, 56.

and Siemens & Halske A .- G., photoelectric generator, (P.), B., 694.

Schou, H., margarine, (P.), B., 495. Schou, S. A., and Madsen, C. J. T., in-

fluence of p_H on stability of Senega saponin, B., 1131.

Schouls, (Mlle.) G., application of affinity and quantum statistics to catalysis, A., I. 88.

Schour, I., rat incisor as index of calcium

metabolism, A., III, 131. Schonsboe, M. See Fridericia, L. S.

Schouten, A. E., nitration and halogenation of a\beta-dianilinoethane and its derivatives. I., A., II, 335. Nitration and halogenation of NN'-diphenylethylenediamine and its derivatives. II., A., II,

Schouten, C. See Grondijs, H. F.

Schouten, J. F. See Ornstein, L. S. Schoutissen, H. A. J., [lecture experiments], A., I, 380. Diazo-chemistry, A., II, 376.

Schouwenburg, K. L. van. See Eymers,

Schpak, M., analysis of soap for fatty

acids and alkalinity, B., 1078. Schpakovski, A. U. See Berenschtein, $ar{F}, J$.

Schpitalni, A., and Valeschkevitsch, A., preparation of casein wool fibres, B., 1032.

Schpolski, E. V., and Ivanova, E. N., photochemical action of ultra-violet rays on Eder's solution, A., I, 38.

and Sheremetiev, G. D., quenching of fluorescence and photo-sensitisation in solutions; investigation of photosensitisation in solutions. III., A., I,

Schpringoltz-Schmidt, A. K., taxonomy and biology of parasites of fur-bearing animals and methods of combating them, B., 397.

Schpunt, S. J. See Belopolski, A. P.

Schrader, A., and Hanemann, H., microscopical examination of lead and lead alloys, B., 572.

See also Hofmann, W.

Schrader, A. L. See Hesse, C. O.

Schrader, G. A., vitamin-B complex. II. Quantity of glycogen in the vitamindeficient rat and its ability to deplete this glycogen during starvation. III. Ability of the vitamin-deficient rat to utilise lactic acid. IV. Apparent ability of the vitamin-B-deficient rat to transform carbohydrate into fat, A., III, 188.

Prickett, C. O., and Salmon, W. D., symptomatology and pathology of potassium and magnesium deficiencies

in rats, A., III, 459.

Schrader, H., preparation of alcoholic plant extracts, B., 187.

Schrader, Hans (Essen), influence of production method and heat-treatment on ductibility of case-hardening steels, B., 559.

See also Houdremont, E.

Schrader, Hans (Essen-Bredeney). See Union Carbide & Carbon Corp.

Schrader, K. See Lehmstedt, K. Schrader, O. See Hock, H.

Schrajbman, S. S., preparation of barium chlorate from sodium chlorate, B., 904.

and Baleev, A. V., permanganometric determination of chlorates, A., I, 260. Nomograms for calculating percentage contact oxidation of sulphur dioxide, and composition of oleum, B., 32.

Schramek, W., textile-fibre science, B., 23. and Succolowsky, O., reaction metal hydroxide solution-cellulose fibre. III. Transformation reactions in 0-10% sodium hydroxide solutions of sodium celluloses obtained in highly concentrated sodium hydroxido solutions, A., II, 401.

Schramm, G. See Butenandt, A.

Schramm, J., copper-zinc diagram, A., I, 176. New phase in the iron-zinc system, A., I, 608.

and Luckert, H. J., eutectic and peritectic solidification processes with one degree of freedom in ternary alloys, A., I, 456.

Schramm, W. See Nehring, K.

Schramrai, F. I., and Saldau, P. J., equilibrium diagram of the system aluminium-lithium, A., I, 607.

Schrauth, W., salves, creams, soaps, etc., (P.), B., 1236.
and Deuts. Hydrierwerke Akt.-Ges., [production of maleio acid by] catalytic oxidation of turpentine oils, (P.), B., 118. and "Unichem" Chemikalien-Handels

Akt.-Ges., aliphatic or cycloaliphatic

primary amines, (P.), B., 418. Schreder, K., Brunner, R., and Hampe, R., composition of last runnings of wort using sparge waters with differing temporary hardness values, B., 485. Iron oxide and aluminium oxide content of ash of barley, malt, wort, and beer, B., 718. Industrial bottom-fermentation yeasts, B., 1115.

Schreiber, D. S. Sce Sergeev, S. V. Schreiber, H. See Czochralski, J. Schreiber, N. E. See Sollmann, T.

Schreiber, W., iodine content of German potash fertilisers, B., 71.

Schreiber, Walter, calculation of dia-phragm gas-flow meters, B., 406.

Schreiber, W. T., Geib, M. N. V., and Moore, O. C., effect of sizing, weaving, and abrasion on physical properties of

cotton yarn, B., 898.
Schreiner, C. See Werner, C. V.
Schrenk, H. A., and Amer. Enka Corp., apparatus for spinning artificial silk,

(P.), B., 1192. Schrenk, H. H. See Yant, W. P. Schrero, M., and Flint, F. C., bibliography on decolorising of glass, B., 910.

Schretter, A. See Charit, A. Schreus, H. T., which isomeride of coproporphyrin is eliminated during blood [pigment] decomposition? A., III, 109.

and Carrié, C., formation of bile-pigment, A., III, 57.

Schreven, D. A. van, copper deficiency in sugar beets, B., 1104.
Schreyegg, H. See Täufel, K.

Schribaux, and Lansade, disinfection of sugar-beet seed heads, B., 709.
Schriel, M., action of barium metal on

barium oxide at high temperatures, A., I, 320.

Schriever, H. See Feldberg, W.

Schriever, W., and Smith, R. E., dia- and para-magnetic susceptibilities [of various substances] at 2-10 oersteds, A., I, 504.

Schrift, M. H. See Tui, C.

Schröder, C. R. See McKay, E. M. Schröder, E. See Veith, H.

Schroeder, E. B., automobile top-dressing, (P.), B., 1243.

Schroeder, E. F., and Woodward, (Miss) G. E., enzymic hydrolysis of glutathione by rat's kidney, A., III, 394.

See also Woodward, (Miss) G. E. Schroeder, F., determination of $p_{\rm H}$ values in the service of the rayon industry, B., 1321.

Schroeder, F. W., and Corhart Refractories Co., [fused] refractory, (P.), B., 1207.

Schroeder, H., glaucoma and ædema, A., III, 206.

Schroeder, P. See Nichols Eng. & Res.

Schroeder, R. A., effect of summer oil sprays on carbon dioxide absorption of apple leaves, B., 600. Schröder, W. See Traube, W.

Schroeder, W. C., Berk, A. A., and Gabriel, A., solubility equilibria of sodium sulphate at temperatures from 150° to 350°. III. Effect of sodium hydr-

oxide and sodium phosphate, A., 1, 610. Berk, A. A., and Partridge, E. P., solubility equilibria of sodium sulphateat temperatures from 150° to 350°. IV. Comparison of evaporation and equilibrium solubility values, A., 1, 610.

Schröer, E., viscosity of gas mixtures and its representation by gas-kinetic mixture formula, A., I, 72. Theory of gravimetric analysis, A., I, 196. Sensitive test for sulphur with nascent hydrogen, A., I, 530. [Activated form of oxalic acid], A., II, 135.

and Dinglinger, (Frl.) A., kinetics of the thermal decomposition of oxalic acid, A., I, 622.

See also Dinglinger, (Frl.) A.

Schröter, F. See Knoll, M. Schröter, G. A., organisation of [utilisation or disposal of industrial waste products, B., 505. and Dräger, O. H., detecting presence of

mustard gas (yperite) [in gas warfare], (P.), B., 1412.

Schröter, H. See Maurer, K. Schröter, K. See Dawihl, W., and Gen. Electric Co.

Schropp, W. See Scharrer, K. Schroth, W., continuously-operating [vertical] retorts for production of gas, (P.), B., 1009.

Schrum, H. See Diels, O.

Schtaniko, I. G. Sce Uschakov, S. N.

Schtatnov, V. I., and Odintzova, S. V., availability of adsorbed phosphoric acid to plants, A., III, 237.

Schtekkel, F. A., and Pisterman, P. A., instrument for analysis of methanenitrogen mixtures, acting on principle of thermo-conductivity, B., 1002.

Schtepan, G. V. See Ljasko, B. A. Schternin, E. B. See Kurnakov, N. S. Schtessel, T. A., calcium content of blood during experimental poisoning with sodium fluoride, A., III, 426.

See also Gadaskina, I. D.Schtraler, F. E., and Moiseenko, V. M., hydrogenation of anthracene fraction of coal tar, B., 106.

Schtrauf, E. A. See Berdennikov, V. P. Sehtschapov, N. P., testing of impact resilience, B., 987.
Schtschekin, V. V., amalgamation of

platinum as an electrolytic process, B., 356.

Schtschekin, Z. See Pavlovitsch, P. Schtschelkin, K., frequency of detonation

spin, A., I, 189.

Schtschepkin, G. See Kurtschatov, I. Schtscherbakov, Koplanov, and Zolotov, hydrogenation of oils with nickel formate catalyst at Kazansk works, B., 366.

Schtscherbakov, A.A. See Mikulinski, A.S. Schtscherbakov, I.G., and Gratschev, K.J., electrolytic reduction of ferric sulphate in presence of titanium sulphate, A., Ī, 419.

and Jumanova, L. V., discharge of alkali metals during electrolysis of carnallite,

B., 1358.

Schtscherbakov, V. G., volumetric determination of cerium in rare earth oxide mixtures, A., I, 477.

and Sachiev, I., rapid determination of oxidised and non-oxidised molybdenum in roasted ore, B., 1065.

Schtscherbatschev, K. D., analysis of methylene-blue, B., 762.

Schtscherbina, N. V. See Tananaev, N. A.

Schtscherbina, V. M. See Kagan, G. B. Schtschigelskaja, M. See Dobrjanski, A. F., and Tischtschenko, D.

Schtschigol, M., and Dubinski, N., analysis

of group II and III cations in presence of PO₄", A., I, 98.
Schtschnkina, M. N., Lapina, R. A., and Preobrashenski, N. A., synthesis of cocaine from hyoscyamine, A., II, 265.

Schutzer, V. V., molting, A., I, 603. Schubert, C. E. See Casherg, C. H. Schubert, M. P., interaction of iodoacetic acid and tertiary amines, A., II, 9. See also Michaelis, L.

Schubert, R. See Stather, F.

Schubin, M. I., direct determination of aluminium in aluminium-iron-manganese bronzo, B., 448.

Schubin, S., and Vonsovski, S., electron theory of metals. II., A., I, 169.

Schubnikov, L. V., cold laboratory, A., I, 201.

and Alexeevski, N. E., transition curve for destruction of superconductivity [in tin] by an electric current, A., I,

and Chotkevitsch, V. I., critical values of field strength and current for superconductivity of tin, A., I, 174.

Chotkevitsch, V. I., Schepelov, J. D., and Rjabinin, J. N., magnetic properties of superconducting metals and alloys, A., I, 121.

and Kikoin, A. K., optical studies with liquid helium 11, A., I, 115.

and Nakhutin, I., electrical conductivity of a superconducting sphere in the intermediate state, A., I, 292.

and Schalit, S. S., ferromagnetic properties of some paramagnetic salts, A., I, 452.

See also Fomin, V., Lasarev, B. G., Rudenko, N. S., Trapeznikova, O., and Vereschtschagin, L. F.

Schübel, F. W., purification of water supplies, B., 92.

Schüler, H., quantitative relationship between the magnetic moments of the

atomic nuclous, A., I, 546.

and Korsching, H., quadrupole moment and magnetic moment of anGa and 71Ga, A., I, 53. Regularities in structure of atomic nuclei, A., I, 59. Regularity in structure of atomic nuclei, and determination of quadrupole moments of 187 Rc and 186 Rc, A., I, 272. Variation in magnetic moment of atomic nuclei by formation of particle pairs, A., I, 341.

and Schmidt, T., quadrupole and magnetic moment of 145In, A., I, 157. Schueler, J. L., treatment of galvanised sheets for painting, B., 245. Galvanised and galvannealed sheets, B., 790.

Schüller, H., Matzner, E., and Kailich, A., caoutchouc threads, (P.), B., 1246.

Schuen, M. See Schnen, W.

Schuen, W., blistering in ceramics, B., 782. and Schuen, M., physics of firing, B., 1205. Sehünemann, H. See Thilo, E.

Schunhoff, F., drying of bricks, B., 782. Air in annular kilns, B., 1338.

Schueppert, K. J. See Kranzfelder, A. L. Schürhoff, P. N., and Hartwich, K., pharmacognosy of Matricaria discoidea, D.C., A., III, 246.

Schürhoff, P. N., and Plettner, G., occurrence of rhapontizin in species of Rheum; its identification in adulterations of rhubarb rhizomes, A., III, 331.

Schürmann, E., and Esch, W., purification of asbestos, (P.), B., 779.

Schuette, H. A., and Brooks, J. W., elderberry-seed oil (Sambucus canadensis, L.), B., 152.

Schütz, A. F. See Müller, Adolf. Schütz, F., Klauditz, W., and Winterfeld, P. rapid determination of the viscosity of cuprammonium solutions of pulps, B., 769. Schütz, Franz, adsorption on foam, A., I,

Schütz, W., ternary compound Mg₄Cu₁₁Al₁₁, A., I, 609.

Schütza, H. See Thiessen, P. A. Schütze, H. See Guyer, A.

Schütze, W. See Barwick, H.

Schuh, A. E., testing of organic finishes, B.,

and Theuerer, H. C., measurement of distensibility of organic finishes, B., 261. Organic finishes; effect of film thickness on physical properties and exposure behaviour, B., 370.

Schuhardt, V. T. See Axe, W. N. Schuhknecht, W., spectro-analytical determination of potassium, A., I, 326.

Schujkin, N. I., A9:10-octahydronaphthalene; isomerising action of zinc chloride in dehydration of 2-cyclopentylcyclopentanol, A., II. Characteristic contact-catalytic transformations of cyclohexane hydrocarbons, A., II, 330. Destructive catalytic hydrogenation of xylene and solvent naphtha, B., 875. See also Balandin, A. A.

Schujkina, Z. I., catalytic oxidation of alicyclic amines with the side-chain CH₂NH₂. I. and II., A., II, 333.
Schukarev, S. A., at. wt. and its importance

for characteristics of chemical elements, A., I, 437. Present state of Mendeléev's periodic law, A., I, 437.

Schulek, E., and Boldizsar, I., p-aminobenzenesulphonamide and its determination, A., II, 314.

and Clauder, O., bromatometric determination of 8-hydroxyquinoline; determination of 8-hydroxyquinoline in pharmaceutical preparations, A., II, 314.

and Szlatinay, L., determination of arsenic and total and distillable (sulphoxylate) sulphur for control of arsenobenzene preparations of neosalvarsan type, B., 729.

and Wolstadt, R., determination of arsenic and antimony in organic compounds and mixtures, A., II, 313. Schulenina, A. D. See Krasnikov, A. I.

Schuler, B. See Rennkamp, F. Schuler, (Mlle.) H., properties of ultraviolet spectrum of salicylic acid as a function of $p_{\rm H}$, A., I, 343.

Schuler, K., wort cooling and separation of sediment, B., 606.

Schuler, R., bread and other alimentary products, (P.), B., 495.

See also Standard Oil Development Co. Schuler, W., Bernhardt, H., and Reindel, W., adrenaline synthesis in vitro under physiological conditions. II. Production of tyramine from tyrosine in surviving tissue; relation to adrenaline synthesis, A., III, 37.

See also Reindel, W.

Schulerud, A., starch as determining factor for baking quality of rye flour, B., 280. Judgment of the baking quality of rye flour, B., 1119.

Schulgina, M. N. See Belopolski, A. P. Schulhoff, H. B., and Heukelekian, H., direct plating method for determination of potability of water, B., 298. See also Ridenour, G. M.

Schulman, J. H., structure in relation to living biological functions, A., III,

386.

and Rideal, E. K., molecular interaction in monolayers. I. Complexes between large molecules. II. Action of hæmolytic and agglutinating agents on lipo-protein monolayers, A., I, 235.

See also Alexander, A. E., Bauer, S. G., and Mitchell, J. S.

Schulmann, W., significance of trisodium phosphate in the sugar industry, B., 1112.

See also Bries, R. Schulshenko, K. See Petrovski, J.

Schulte, F., thickening of wash oil, B., 517. Schulte, J. See Chrometzka, F.

Schulte, M. J., examination and composi-

tion of Pyrasulf, B., 1267.
Schulte, W. See Dane, E.
Schulte, W. C. See Doan, G. E.
Schulten, H. See Hieber, W.
Schulten, K. af., bleaching of pulp, B., 1321.

Schultes, H., new developer of the pyrogallol series, B., 292.

Schultes, W., gas analysis, B., 864.

Schultz, A., Atkin, L., and Frey, C. N., fermentation test for vitamin- B_1 , A., Ill, 325.

Frey, C. N., and Standard Brands, baked goods [bread], (P.), B., 390. Kirby, G. W., Frey, C. N., and Standard

Brands, [manufacture of lactic acid by] fermentation process, (P.), B., 384.

and Standard Brands, bakers' yeast, (P.), B., 177.

See also Frey, C. N., and Internat. Yeast Co.

Schultz, F. W., and Knott, E. M., use of a ten-day period for assay of vitamin-B₁ by rat-growth technique, A., III, 405.

See also Fetter, D. Schultz, H. L. See Pollard, E.

Schultz, J., Augustin, H., and Finzen-hagen, H., potato haulm silage for feeding milch cows, B., 616. See also Christman, A. A.

Schnltz, K., and Armour & Co., spraydrying apparatus, (P.), B., 301.

Schultz, T. See Blumenthal, F. Schultz, V. N., regeneration of oxides of nitrogen in the tower sulphuric acid process, B., 900.

Schultze, G., practical experience with chlorinated caoutchouc films, B.,

and Habermehl, R., cellulose acetobutyrate—a new raw material for lacquers and plastics, B., 466.

Schultze, G. R., contribution of physical chemistry to knowledge of geochemical transformation processes of petroleum, B., 1004.

and Müller, K. L., primary processes in thermal decomposition of butane, B.,

Schultze, K., technical examination of fuels, B., 513.

Schultze, M. O., and Elvehjem, C. A., glutathione content of blood in nutritional anæmia, A., III, 58.

Elvehjem, C. A., and Hart, E. B., copper and iron content of tissues and organs in nutritional anæmia, A., III, 11. Copper content of blood in nutritional anamia, A., III, 11. See also Lyman, C. M., and Stotz, E.

Schultze-Rhonhof, H., tests of inflammability of mine timbers, B., 141.

Schultzer, P., biological assay of the cortical hormone by survival method in adrenalectomised young rats, and influence of salt content of hormone extract, A., III, 149. Saturation of a scurvy patient with small doses of ascorbic acid; daily human requirement, A., III, 496. Schulz, A. See Schickh, O. von.

Schulz, E. See Scheuer, E. Schulz, E. H. See Hartmann, F.

Schulz, E. O., non-equivalence of lime raw materials in glass melts, B., 544.

Schulz, G. V., highly polymerised compounds. CXLV. Osmotic pressure of methylcelluloses. CLXIII. Solubility and precipitability of substances of high mol. wt. CLXVII. Influence of temperature on osmotic pressure of solutions of substances of high mol. wt., and their molecular state, A., I, 28, 510, 563. Mol. wts. of large molecules and their determination, A., I, 352. Swelling measurements on polymeric homologues of the cellulose nitrates, A., I, 410.

and Husemann, E., highly polymerised compounds. CXLVI. Kinetics of chain polymerisation. I. Thermal polymerisation of pure styrene. CLVIII. Kinetics of chain polymerisation. II. Thermal polymerisation of styrene out of contact with oxygen, and chain-breaking process. CLXXIII. Kinetics of chain polymerisation. III. Methods and present data, A., I, 86,

522, 569.

See also Staudinger, H.

Schulz, J. A., effects of ingestion of fluorides on teeth, bones, blood, and tissues of albino rats, A., III, 479.

Schulz, K. G. See Kolbach, P. Schulz, O. F., polymethine dyes [photosensitising dyes], (P.), B., 1410.

Schulz, W., effect of hormones on bloodsugar in man, A., III, 151. See also Meyerhof, O.

Schulze, A., allotropy of the chemical elements, A., I, 173. Electrical con-ductivity of aluminium for largescale conduction, B., 936. Electrical and thermal investigations with manganin, B., 1220. Electric properties of manganin after various heat treatments, B., 1354.

See also Kröhnke, F., Kussmann, A.,

and Steinwehr, H. von.

Schulze, B., microscopical investigations of unbleached, semibleached and bleached sulphite and sulphate pulps, B., 331. The Zeis comparison microscope in paper microscopy, B., 895. See also Lambertz, A.

Schulze, E. See Dieckhoff, J., and Kampelmann, F.

Schulze, G. See Simon, Arthur. Schulze, K. [with Springmann, (Frl.) H.], determination of viscose staple fibre in mixture yarns by mechanical separation, B., 1034.

Schulze, W. A., and Buell, A. E., copper is economical for sweetening refinery and natural gasolines, B., 640. Effect of sweetening on the properties of gasolines, B., 1005. Chaney, L. V., and Phillips Petroleum

Co., sweetening of hydrocarbon oils with alkali polysulphides, (P.), B., 15. Sweetening of hydrocarbon oils, (P.), B., 114.

and Gregory, L. S., copper sweetening process [for petrol], B., 314.

and Phillips Petroleum Co., treatment of hydrocarbon oils, (P.), B., 1302.

See also Reid, J. A. Schumacher, E. E., and Souden, A. G., alloys of copper and iron, B., 44. Tensile, electrical, and corrosion properties, B., 44.

See also Schumacher & Co.

Schumacher, H. J., halogens as catalysts, A., I, 314. Homogeneous catalysis by means of halogens, A., I, 417. Nitro-

gen hexoxide (NO₃), A., I, 421. and Frisch, P., kinetics of F₂O₂ decomposition, A., I, 621.

and Sundhoff, D., photochemical formation of carbonyl chloride from chloroform, chlorine, and oxygen sensitised by chlorine, and retardation by alco-

hols and ammonia, A., I, 91. See also Bodenstein, M., Brenschede, W., Brodersen, P. H., Franke, W., Frisch, P., Koblitz, W., and Müller, K. L.

Schumacher, L. See Fleischman, P. Schumacher, W. See Muraour, H. Schumacher & Co., and Schumacher, E. E., cast-iron alloys, (P.), B., 357.

Schumann, P. See Mannich, C. Schumb, W. C., and Anderson, H. H., silicon fluorochlorobromides, A., I, 321.

and Crane, H. I., stopcock substitute, A., I, 100.

and Klein, C. H., silicon oxybromides, A., I, 195.

and Nolan, E. J., arsenate method for determination of zirconium, A., I,

Peters, H., and Milligan, L. H., cavitation-erosion of metals, B., 794.

Schumpelt, K., developments in electrodoposition of platinum metals, B., 579.

Schundler & Co., Inc., F. E. See Denning, P. S., and Jones, O. L.

Schuphan, W., quality defects in celeriac: changes in valuable constituents due to

manuring, B., 599. chuppe, W. See D'ans, J. Schuppe, W

Schur, J. S., magnetic susceptibility of mercury vapour, A., I, 352. Magnetic susceptibility of vapours of organic compounds, A., I, 404.

and Janus, R. I., ballistic equipment for testing feebly magnetic materials, B.,

Schur, M. O., and Brown Co., nitrocellulose [of low solution-viscosity], (P.), B., 127. Paper for towelling and other purposes, (P.), B., 230. Artificial leather, (P.), B., 335. Rubber-reinforced waterlaid webs of fibre, (P.), B., 537

Hearn, W. L., and Brown Co., waterlaid felt, (P.), B., 230. Bitumenised felts, (P.), B., 900.

and Hoos, B. G., nitration of purified wood fibre, B., 226. See also Richter, G. A.

Schurecht, H. G., and Lampman, C. M., drying properties of clays. I. Effect of small imposed loads on rate of drying. II. Effect of small imposed loads on shrinkage behaviour and plastic properties. III. Influence of pallets on quality of clay products, B., 1049.

and McMahon, J. F., influence of compositions of underslips, glazes, and bodies on blistering and other glaze

defects, B., 1339.

Schurigina, E., binding of water in ferric hydroxide and aluminium hydroxide sols, A., I, 181.

Schurmovskaja, N., and Bruns, B., mechanism on catalysis of oxidation of carbon monoxide on a hopcalite surface. I. Poisoning of hopcalite by water vapour, A., I, 57ž.

Schuschpanova, T. E. See Urazov, G. G. Schusser, R. See Kiprianov, A. I. Schuster, C. E. See Stephenson, R. E.

Schuster, E. See Jantsch, G. Schuster, F., wood from viewpoint of fuel upgrading and production of [liquid and gaseous] fuels. I. Scientific basic principles. II. [Carbonisation of] cellulose, lignin, and native woods, B., 102, 199. Purification of technical gaseous fuels, B., 201. Naphthalene and its present uses, B., 415. Detoxification of town's gas at Hameln [Germany], B., 746. Water-gas equilibrium and detoxification of town gas, B., 746. Corrosion by the combustion products of normal and de-

toxified town gas, B., 1154.
[with Panning, G.], effect of addition of ferric hydroxide on products of lowtemperature carbonisation of lignin,

B., 1152.

See also Witt, D. Schuster, Karl, and Mischke, W., measurement of [beer] foam, B., 829. Slide-rule for protein calculation, B., 1260.

Schuster, Karl (Prag), decomposition of human hair by boiling with concentrated magnesium chloride solution, A., III, 252.

Schuster, P. See Lohmann, K. Schuth, E. See Heinrich, F. Schutt, H. C. See Petty, E. Schutz, C. A. See Donnally, H. H.

Schutz, P. See Spry, R.
Schutz, P. W. See Lewis, G. N.
Schuvalov, N. N. See Salkind, J. S.

Schuvalov, S. P., critical number of quanta in photography. I. II. Polydisperse

emulsion, A., I. 193, 254.
Schvartzburg, L. E. See Kogan, A. I.
Schvartzman, U. I. See Plotnikov, V. A. Schvedov, D. A., Kuzin, S. A., and Andreeva, A. I., sapropels as source of high-molecular carboxylic acids, B., 1167.

Schvedov, V. P., determination of fluorine in drinking water, B., 626.

Schwab, A. See Schimunek, J. Schwab, E. H. See Decherd, G., and Herrmann, Georges.

Schwab, G., distribution and formation of acid amides in higher plants, A., III, 238. Schwab, G. M., chromatography as a new

aid to analytical chemistry, A., I, 630. [with Friess, H.], atomic chlorine, A.,

and Dattler, G., inorganic chromatography. II. Separation of acids, A., I, 529.

Schwab, G. M., and Jockers, K., inorganic chromatography, A., I, 150, 529. Inorganic chromatography. I., A., I, 578.

Schwab, J. W., and Duecker, W. W., high-capacity sulphur melter, B., 1046.

See also Koppers Co. of Delaware. Schwabe, E. L. See Emery, F. E. Schwabe, K., glass electrode and $p_{\rm H}$ control, A., I, 266. Schwachman, H. See Cohen, Barnett.

Schwagmeyer, W., relation between absorption of food and alcohol content of

blood in man, A., III, 291. Schwaiger, K., influence of lubricants on startability of engines, B., 1006. internal-combustion

Schwaigerer, S. See Siebel, E. Schwalbe, C. G., lignin problem, B., 225. Colloid-chemical and chemical differences between spruce wood and spruce-

wood pulp, B., 1035. Schwalbe, H.C., pulp and paper industrial

water specifications, B., 1139. Schwander, P., diffusion of halogenated hydrocarbons through the skin, A., III,

Schwaneberg, H. See Strack, E

Schwartz, A., and Kuzmin, S. F., potato genetics. II. Variability of protein content in the S. phureja × S. rybinii interspecific hybrids, B., 81.

Schwartz, Alfred, formation of a substance similar to histamine in defibrinated and coagulated blood of the rabbit, A., III, 83.

and Riegert, A., simplification of the permutit process for determination of histamine in the blood, A., III, 3.

Schwartz, C. See Hall, G. O. Schwartz, E. H., and Rose, G. E., open-hearth furnace operation—four million B.Th.U. per ton, B., 788.

Schwartz, G. M., magnetite metacrysts, A., I, 154. Paragenesis of pyrrhotite, A., I, 270. Alteration of spodumene to kaolinite in the Etta mine, A., I,

Schwartz, H. A., determining nodule number [in steel], B., 246. Field of malleable cast iron, B., 1212.

Johnson, H. H., and Junge, C. H., retarding effect of certain metallic elements on graphitisation [in iron and iron alloys], B., 1212. and Junge, C. H., metallographic changes

[in mallcable cast iron] during cooling between first and second stages of annealing, B., 1212.
and Ruff, W., origin and growth of

graphite nuclei in solid and liquid iron solutions, B., 678.

Schwartz, L. See Reiss, M. Schwartz, N. See Dahl, O.

Schwartz, W., production of fat by moulds

and bacteria, A., III, 271. Schwartzkopff, H., concretes with burnt clay particles as an aggregate, (P.), B.,

Schwarz, C. [with Bohrn, A., and Mayer, A.], relations between thyroid gland, blood-sugar, and storage of glycogen, A., III, 492.

Schwarz, E., and Cislaghi, F., biological action of ascorbic acid. I. Neutralising effect on diphtheria toxin, A., III, 44.

Schwarz, E. R., optics and the textile industry, B., 890. Textile fibres in the light of modern science, B., 890.

Schwarz, G., Hofius method of preserving liquid dairy products, B., 281.

and Fischer, Ottmar, determination of metals in milk and its products. II. Determination of copper. III. Discoloration of Harz cheese, B., 490.

Schwarz, Hans, liquid paraffin and nut

oil [in cosmetics], B., 618. Schwarz, Herman, and Lichtenberg, H. H., relation of blood-cholesterol to hæmoglobin and serum-protein, A., III, 450. Schwarz, K., theory of electrolytic pheno-

mena in solid metals, A., I, 519. See also Schossberger, \hat{F} .

Schwarz, L. See Dědek, J.

Schwarz, L. (Hamburg), and Deckert, W., arsenic content of hair, etc., from industrial sources, A., III, 29.

Sieke, F., and Deckert, W., toxic gases in dwellings, B., 92.

Schwarz, M. von, frictional properties of light bearing alloys, with particular reference to "Quarzal," B., 1222.

and Daschner, H., recognition of crystal symmetry [in alloys] by observations of the polarisation colours between crossed nicols, A., I, 128.

Schwarz, P. See Antilum A .- G.

Schwarz, Robert, nomenclature of mineral oil products, B., 1005.

Schwarz, Robert (Königsberg), and Meckbach, H., silicon chloride of formula Si₁₀Cl₂₂, A., I, 372. and Pietsch, G., attempt to prepare

silicon dichloride, A., I, 372.

and Schmeisser, M., new or bromine, BrO₂. I., A., I, 421. oxide of

Schwarz von Bergkampf, E., composition of producer gas in the equilibrium state,

Schwarzenbach, G., and Brandenberger, M., molecular resonance systems. V. New

phthaleins, A., II, 501. Brandenberger, M., Ott, G. H., and Hagger, O., molecular resonance

systems. I., A., II, 241.

Epprecht, A., and Erlenmeyer, H., dissociation constants in water and deuterium oxide; measurements with the deuterium electrode, A., I, 85.

and Ott, G. H., molecular resonance systems. III. Indicator properties of some anilinesulphonephthaleins, A., I,

Ott, G. H., and Hagger, O., molecular resonance systems. II. Preparation and properties of substituted anilinesulphonephthalcins, A., II, 241.

See also Erlenmeyer, H., Karrer, P., and Mohler, H.

Schwarzkopf, H., bleaching materials, particularly bleaching of [live] hair, (P.), B., 1328. Hair dressing and treating materials, (P.), B., 1333. Washing materials particularly for use as shampoos, (P.), B., 1368.

Schwarzkopf, M. See under Schwarzkopf,

Schwarzkopf, O. See Aubel, E.

Schwarzkopf, P., compound structural material [sintered alloys] and shaped articles thereof, (P.), B., 251.

Schwedler, H. See Hein, F. Schwedtke, G. See Heubner, W.

Schweiger, A., and Hanseatische Mühlenwerke Akt.-Ges., concentrated phytosterin-containing products, (P.), B., 1135.

Schweikert, G., theory of detonation, B., 502, 623.

Schweitzer, A., and Wright, S., action of acetylcholine, prostigmine, and related substances on the knee-jerk, A., III, 349. Action of eserine and related compounds and of acetylcholine on central nervous system, A., III, 349. Action of adrenaline on the knee-jerk, A., III,

Schweitzer, C. H. See Neuberg, C. Schweitzer, G., direct [photographic] positives by reversal, B., 189. Monochromes coloured by simple development, B., 1137.

Schweitzer, T. R. See Hoffman, C. Schweitzer, W. K. See Grasselli Chem. Co. Schweizer, G., cold sterilisation of nutrient media and its importance for pure culture of micro-organisms, A., III, 277. Schwen, G., fastness of cotton dyes, B.,

Schwencke, E. H., building plates [from sisal waste], (P.), B., 677.

Schwenk, E., and Whitman, B., debromination of mono- and di-bromocholestanone, A., II, 294.

See also Whitman, B., and Wintersteiner, O.

Schwenk, H. S., and Noble, D. E., relayfree mercury vapour triodo control for a constant-temperature water-bath, A., I,

Schwenk, V., noble-metal coatings, B., 686. Schwerdtfeger, F., and Stahl, G., control of the pine looper moth with contact poisons, B., 712.

Schwerdtfeger, H., bimolecular reactions; calculation of the duration of chemical

reactions. II., A., I, 189. Schwerdtner, H. See Reumuth, H. Schwertassek, K., measuring resistance of dyed materials to heat, B., 661. Iodine absorption by mercerised cotton, B., 1040.

Schweyer, H. E., measurement of particlesize distribution by optical methods; effect of light of different wavelengths, B., 628.

See also Traxler, R. N. Schwicker, A., use of potassium hydrogen sulphite in volumetric determinations, A., I, 197. Volumetric analytical notes; [determination of chloral hydrate, hypophosphite, phosphite, halogen oxyacids, and phenol], A., II, 477. Determination of albumin in macaroni, etc., B., 488.

Schwiers, A., filter, (P.), B., 1147. Schwiete, H. E., cements for concrete road construction, B., 141. [Portland cement] clinker components and their study, B., 552.

and Strassen, H. zur, high-magnesia cements, B., 242.

See also Gronow, H. E. von.

Schwind, V. See Lieser, T. Schwindt, H. See Wulff, P.

Schwinger, J., magnetic scattering of neutrons, A., I, 275. Non-adiabatio processes in inhomogeneous fields, A.,

and Teller, E., scattering of neutrons by ortho- and para-hydrogen, A., I, 339,

Sclar, M., and Kilpatrick, M., rate of reaction of magnesium with acids in ethyI alcohol, A., I, 250.

Sclare, I.M., hypoadrenalism and pellagra: rôle of vitamin deficiency, A., III, 380. Scofield, C. S., Moon, C. L., and Knight, E. W., subsoil waters of Newlands

(Nevada) field station, B., 163. See also Kearney, T. H.

Scoffeld, F., physical properties of oil films. III. Drying time and durability of oil mixtures, B., 58. Effect of iodine value on drying time of linseed oil, B., 463. Prevention of "crawling" of oil films, B., 1087.

See also Cornthwaite, C. R.

Scofield, H. H., effect of freezing on permeability, strength, and elasticity of concrete and mortars, B., 1055.

Scoles, D. L., and Rothstein, J., use of standard sodium hydroxide solution for the standardisation of potassium permanganate [via oxalic acid], A., I, 633.

Sconzo, A., kinetics of reaction between potassium dichromate and sodium sulphite in aqueous solution, A., I, 249. Basic chromium sulphites, A., I, 258. Scortecci, A., flakes in steel, B., 561.

Scott, A. A., drainage measurements on a paper-machine wire at various points, B., 426.

Scott, A. B., and Robertson, G. R., winepreserving apparatus, (P.), B., 720. Scott, A. D. See Cowdrey, W. A., and

Hughes, E. D.

Scott, A. F., and Coe, C. S., displacement reactions in fused pyridinium hydrochloride solutions, A., I, 526.

and Hurley, F. H., jun., chemical at. wt. of carbon, A., I, 388. Nephelometric end-point of at. wt. titrations, A., I, 475.

Scott, A. H., liquid distribution in packed towers, B., 1.

Scott, Aleita H., effect of hypophysectomy on blood-lactic acid of Rhesus monkeys, A., 111, 437.

Scott, A. W., pasteurising processes and plants. II. [Milk processing and control.] III. Dairy layout, B., 179, 610. Heating milk to pasteurising temperature, B., 1120.

Scott, C. M. See Haddow, A.

Scott, D.A. See Fisher, A.M.Scott, G.A. See Imperial Chem. Industries. Scott, G. H., and McMillen, J. H., spectrographic analyses of human spinal fluid, A., III, 120.

See also McMillen, J. H.

Scott, G. S., application of mathematics to a technical problem [water filtration], B., 191.

and Jones, G. W., oxidation of anthracite; liberation of carbon monoxide and its relation to ignition temperature, B., 200. Significance of low-temperature oxidation products anthracite mine fire studies, B., 999. See also Cleland, R. R., and Turner, H. G.

Scott, H. See Westinghouse Electric & Manuig, Co.

Scott, H. M. See Hughes, J. S. Scott, J. D. See Haddow, A.

Scott, J. E., and West, E. S., micro-Kjeldahl apparatus, A., I, 153.

Scott, J. R., rubbermeter, a new hardnesstesting instrument, B., 373. Swelling of rubber. VIII. Swelling of vulcanised rubber in fatty oils and mineral lubricating oil, B., 814. Effect of shape and size of test-piece on swelling properties of vulcanised rubber, B., 1091. Behaviour of ebonite towards

organic liquids, B., 1378. See also Brit. Rubber Manufrs. Res. Assoc., Daynes, H. A., Messenger, T. H., and Porritt, B. D.

Scott, K. G., and Cook, S. F., effect of radioactive phosphorus on blood of growing chicks, A., III, 308. See also Cook, S. F.

Scott, M. See Beamish, F. E., and

Thompson, S. O.

Scott, N. D., Walker, J. F., and Hansley, V. L., [additive compound of] sodium [and] naphthalene. I. Preparation of additive compounds of alkali metals and polycyclic aromatic hydrocarbons, A., ÎI, 55.

See also Du Pont de Nemours & Co., E. I.

Scott, R., edible jellies, (P.), B., 617. Jam and marmalade, (P.), B., 1405.

Scott, R. A., wool scouring, B., 533. Scott, R. B., and Brickwedde, F. G., vapour pressure of hydrogen deuteride, A., I, 176. Molecular volumes and expansivities of liquid normal hydrogen

and para-hydrogen, A., I, 551, 601. See also Brickwedde, F. G., and Silsbee, F. B.

Scott, R. D., standards for residual chlorine tests [of water], B., 504. Kimberly, A. E., Van Horn, A. L., Ey,

L. F., and Waring, F. H., fluoride in Ohio water supplies—its effect, occurrence, and reduction, B., 297.

Scott, W., Byers, H. C., and Rubber Service Labs. Co., preservation of

rubber, (P.), B., 67.

and Monsanto Chem. Co., benzyl benzthiazyl sulphides, (P.), B., 1179. Nitrophenyl arylenethiazyl disulphides; [vulcanisation accelerators], (P.), B., 1316.

and Watt, G. W., reactions in the thiazole series. I. Reactions of 2-chlorobenzthiazoles with thiocarbamides, A., II,

524.

Scott, W. J. See Brit. Thomson-Houston Co.

Scott, W. M. See Esselen, G. J.

Scotti, G., determination of cellulose in flour and food pastes, B., 1259.

Scottish Development Council, reports of the Oil from Coal Committee, B., 200, 1153.

Scoular, F. I. See Daniels, A. L.

Scovill Manufacturing Co., and Bahney, L. W., refining of metals [e.g., copper], (P.), B., 456.

See also Beebe, M. C., and Price, W. B.

Scoville, L. P. See Texas Co. Scoville, W. H. See Eddins, A. H.

Scowen, E. F., effects of thyrotropic hormone of anterior pituitary in man, A.,

and Spence, A. W., effect of antithyrotropic serum on thyroid gland of guinea pigs treated with thyrotropic hormone, A., III, 152.

Scoz, G., elimination of ascorbic acid in tubercular animals, A., III, 172. Relationship between variation in bodyweight and content of ascorbic acid in liver of guinea-pigs, A., III, 177.

and Cattaneo, C., avitaminosis-C and experimental tubercular infection, A., III, 172. Electrometric determination of choline-esterase activity of blood; activity in pulmonary tuberculosis, A., III, 482.

Cattaneo, C., and Gabbrielli, M. C., oxygen consumption and enzyme content of the liver and phosphatase content of blood and bone in avitaminosis-C, A., III, 440.

Scoz, G., and De Caro, L., relation between body-weight of pigs and ascorbic acid, cathepsin, and amylase content of liver, A., III, 77.

See also Cattaneo, C.

Scriba, H. See Wrede, K. Scribner, B. F. See Meggers, W. F. Scribner, B. W. See Kimberly, A. E.

Scribner, E. J., and Krueger, A. P., effect of sodium chloride on phage-bacterium reaction, A., III, 488.

See also Krueger, A. P.
Scripture, E. W. jun., possibilities of puzzuolanas in mortars and concretes, B., 1345.

Scroggie, A. G., and Castricum, M., testing

[strength of cotton] yarns, B., 890.

Scudi, J. V., dimerisation of pyruvic anilide, A., II, 386. Iodination of paminobenzenesulphonamide and some symmetrical azobenzenesulphonamides, A., II, 409.

Scurti, F., preservation of fruits and legumes for transport, B., 974.

Seaber, W. M., determination of rotenone,

Seaborg, G. T., Gibson, G. E., and Grahame, D. C., inelastic scattering of fast neutrons, A., I, 593.

See also Gibson, G. E., Grahame, D. C., and Livingood, J. J.

Seaborne, A. B., cleaning, humidifying, or treating air or gas, (P.), B., 996. Seabury, R. L. See Murray, L. W.

Séailles, J. C., purification of lime [calcium] aluminates, (P.), B., 238.
Seal, S. C. See Linton, R. W., and Shri-

vastava, D. L.

Sealtest System Laboratories, Inc. See Johnson, A. H. Seaman, W. See Standard Oil Develop-

ment Co.

Searle, A. B., [paint] extenders, B., 944.

Searle, D. E. See Renshaw, R. R. Searle, H. E., corrosion-resisting nickel alloys, B., 449.

Sears, H. J., and Schoolnik, M., fermentative variability of Shigella paradysenteriæ, A., III, 226.

Sears, O. H. See De Turk, E. E. Sears, P. D. See Riddet, W.

Sears, R. A., experimental varnish making, B., 155.

Seasholtz, J. M., and Seasholtz & Sons, J. M., crystalline decoration for porcelain and porcelain-enamelled articles, (P.), B., 673.

Seasholtz & Sons, Inc., J. M. See Seasholtz, J. M.

Seastone, C. V.. and Herriott, R. M., immunology of pepsin and pepsinogen, A., III, 338.

Seastone, J. B. See Miner, D. F. Seath, J., and Beamish, F. E., separation of gold from tellurium and selenium, A., I, 533.

See also Beamish, F. E., and Russell, J.J. Seaver, J. J., Dougan, C. E., Wetherbee, H. L., and Brassert & Co., H. A., gas

washer, (P.), B., 402.
Seavey, F. R. See Olsen, F.
Sebastian, J. J. S., and Mayers, M. A., coke reactivity; determination by a modified ignition-point method, B., 1293.

Sebba, F., and Pugh, W., gallium. II. Extraction of gallium and germanium from germanite. III. Electrodeposition, purification, and solution of gallium, A., 1,527. Sebe, Y., wood turpentine oil from Pinus formosama, Hayata. I. and II., B., 1238. Seborg, C. O., hysteresis in water sorption by papermaking materials, B., 332. Simmonds, F. A., and Baird, P. K., sorption of water vapour by papermaking materials; effect of physical and chemical processing, B., 26.

Seborg, R. M. See Stamm, A. J. Sebrell, L. B. See Wingfoot Corp. Sebrell, W. H., Onstott, R. H., and Hunt, D. J., riboflavin deficiency in dogs, A. III, 204. Lactoflavin in the treatment of canine black-tongue, A., III, 460.

Secchi, I. M., resistance to filtration of compressible materials. II., B., 95. Recovery of sulphur from coke-oven

gas, B., 747.

Seck, W., starch solutions for dressing or finishing textile fabrics, (P.), B., 776. and Brem, R., unsupported starch films, A., I, 76.

Seckendorff, E. W., and Jeffrey Manufg. Co., apparatus for breaking down material, (P.), B., 631.

Secker, J., chemical agent in sympathetic control of retraction of the nictitating membrane of the cat, A., III, 349.

Sedaschova, E. G., reaction of sodium nitrite with nitrogen oxides, A., I, 142.

Seddon, E., apparatus for examination of cords, inhomogeneities, and surface unevenness in glassware, B., 1048. Constant-temperature and -humidity chamber for use in researches on properties of glasses, B., 1204. See also Preston, E.

Seddon, R. V., and Travers, M. W., thermal decomposition of acetaldehyde and ethylene oxide, A., I, 34.

See also Lowry, T. M.

Sederholm, P. See Benedicks, C. Sedlachek, A. C. See Pfluke, F. J.

Sedlaczek, E., significance of proteins for [photographic] emulsions, B., 188.

Sedlar, E. See Bures, E.

Sedletzki, 1. D., soil and coal formation, A., I, 434. Proton in soils and soil degradation, B., 707.

and Brunovski, B. K., structure of humic acid and its structural connexion with lignins and carbon, B., 513.

Sedzimer, T., coating of metallic objects with layers of other metals, (P.), B., 456. Seebach, F., and Bakelite Ges.m.b.H., air-

drying lacquer from phenol-aldehyde condensation products, (P.), B., 1374. See also Scheiber, J.

Seeber, R. R., Rohrman, F. A., and Smedberg, G. E., corrosion studies in steamheating systems, B., 1285.

Seed, L. See Milles, G.

Seegers, H. G., rotary mixing and emulsifying machines, (P.), B., 99.

Seekles, L., determination of $p_{\rm H}$ of blood and other biological fluids by the glass electrode, A., III, 54. Condition of mineral [substances] in blood-serum. I. Ultrafilterability of calcium, magnesium, and inorganic phosphate in bovine blood serum in relation to $p_{\rm H}$. II. Quantitative relationships between calcium and anionforming constituents, protein, inorganic phosphoric acids, and carbonic acid in normal ox-serum, A., III, 84, 372.

Seel, H., pharmacodynamics of coffee constituents, A., III, 65.

Seeliger, R. See Alterthum, H. Seely, S., variation of the diamagnetism of water with tomperature, A., I_{\bullet} 605.

Seemann, A. K., surface hardening [of steel] with the oxyacetylene flame, B., 1352.

Seemann, H., difference of dispersion and sharpness of lines of X-ray dispersion spectra on entrance or exit from the refracting medium; refraction in thin films of glycerol on quartz, A., I, 541.

Seemann, H. E., applications of radiography and fluoroscopy, B., 801.

Seevers, M. H., Bennett, J. H., Pohle, H. W., and Reinardy, E. W., analgesia produced by nitrous oxide, ethylene, and cyclopropane in the normal human subject, A., III, 179.

and Stormont, R. T., micro-method of gas analysis adapted for biological studies, A., III, 108.

See also Oreutt, F. S.

Séférian, D., formation of metallic nitrides by fusion, B., 560.

See also Portevin, A.
Seferovitsch, J. E. See Vassiliev, B. B.
Seffert, H. See Siebert, W. W.
Sefing, F. G. See Surls, M. F.
Sefranek, B. See Frejka, J.

Segal, C. F. See Gurin, S.

Segeberg, H., acidity of moor soils, especially that produced by iron disulphide, and its determination, B., 1097. See also Arnd, T.

Segesser, A. von. See Edlbacher, S. Segol, E. Sec Michaud, R.

Segond, L., and Michaut, P., manufacture of [resinous] carbamide and formaldehyde products in presence of sulphonated

amide derivatives, (P.), B., 1241. Segrè, E., selector of velocity of slow neutrons, A., I, 212.

See also Artom, C., Dunning, J. R., Fink, G. A., and Perrier, C.

Segre, M. See Capetti, A. Seguin, E. See Palazzo, F. C. Seguin, (Mlle.) L. See François, M.

Seguy, J.D. See Universal Oil Products Co. Seibert, F.B., chemical composition of

the active principle of tuberculin. XX. Comparative yield, potency, specificity, and acid-base-combining capacity of proteins from five human tubercle bacilli culture filtrates and other acid-fast bacilli, A., III, 358.

See also Nelson, W. E.

Seidel, A., luminescence of solutions of terbium salts, A., I, 168.

Kremenevski, N., and Larionov, J., structure of fluorescence bands in aqueous solutions of terbium salts, A., I, 547. See also Kremenevski, N.

Seidel, F., and Engelfried, O., textile auxiliaries and dyes, B., 116.

Seidel, W. See Glathe, H.

Seidenstein, H. R. See Asdell, S. A. Seifriz, W., reaction of protoplasm to radium radiation, A., III, 144. Research on physical properties of proto-plasm, A., III, 234.

Seifter, S. See Quill, L. L.

Seigle, J., primary dendritic and secondary structures in hard steel ingot, B., 560. Primary dendritic and non-dendritic textures in ordinary mild steels, B., 790. Various conditions of ordinary steels, annealed, quenched, hyperquenched, and intermediate states, according to dilatometric cooling curves, B., 790. Micrography and hardness tests on a plain 1.7% carbon steel after various heat treatments, B., 918. Primary and secondary structure in a small ingot of hyper-eutectoid steel (1.28% carbon) in the cast, annealed, water-quenched, and decarburised conditions, B., 1061.

Seigneurin, R., electrophoresis and conductivity of bacterial suspensions, A., III, 433.

Seijo, E. See Richardson, T.

Seikel, M. K., differences in absorption curves of groups of unsaturated hydantoins, A., II, 211.

Seil, G. E., high-temperature refractory cement, (P.), B., 1210.

and Lavino & Co., E. J., chromite material, (P.), B., 39. Chromite refractory materials, (P.), B., 39,

Seith, W., and Beerwald, A., quantitative spectral analysis of aluminiumspectral analysis of a magnesium alloys, B., 686.

and Kubaschewski, O., heat of formation

of some alloys, A., I, 560. and Küpferle, G., application of Hahn's emanation method to metal problems, B., 1218.

Seitz, A. See Küntzel, A.

Seitz, F., matrix-algebraic development of the crystallographic groups. IV., A.,

and Johnson, R. P., modern theory of solids. II. and III., A., I, 286, 501. See also Dushman, S., and Ewing, D. H.

Seitz, G. See Gross, H. Seitz, J., bituminised cement and bituminised mortar, B., 676.

Seitz, W. See Fucks, W. Seiwell, H. R., consumption of oxygen in sea-water under controlled laboratory conditions, A., I, 584.

Seka, R., and Prosche, G., synthesis of chrysin and other hydroxyflavones, A., II, 71.

See also Kohlrausch, K. W. F.

Sekar, K.C. See Rhodes, E. Sekera, F., technique and evaluation of micromanurial experiments, B., 170.

Seki, T., soil formation near the apex of the alluvial pan of Azusa river in central highland of Japan, B., 593. Sekretareva, E. V. See Batalin, V. S. Selbach, H. See Kohl, H.

Selbie, F. R., experimental production of sarcoma with thorotrast, A., III, 12. See also McIntosh, James.

Selby, W. M. Sec Ralston, A. W.

Selényi, G., use of a capillary analytical method for microanalytical purposes, A.,

Seligman, A. M. Sec Fieser, L. F. Seligman, C. G., Ritchie, P. D., and Beck, H. C., early Chinese glass from pre-Han

to T'ang times, B., 37. Seligman, G., nature of snow, A., I, 287.Selinger, E., local quinine therapy in interstitial keratitis and old corneal

capacities, A., III, 13. Selisski, J. P., cameras for X-ray analysis

by inverse-ray method, A., I, 266. See also Kravtschenko, N. A.

Selivanov, A., accelerated drying of products from plastic clay without addition of non-plastic material, B.,

Selivanov, L.S. See Vinogradov, A.P. Selivanova, A.S., and Syrkin, J.K., kinetics of addition of bromine to ether, A., I, 142.

Seljaev, I. A. See Veselovski, V. S. Seljakov, N. J., nature of ordinary ice, A., Í, 225.

See also Gordon, E.A.Sell, O. E. See Musbach, F. L.

Sella, G. M., electrolytic colouring of anodic aluminium oxide layers, B., 578. Selle, H., caution as to usual procedure for preparation of cooling baths of com-bustible compounds with liquid air, B., 508. Determination of detonation velocity of explosives, B., 1279.

Selle, W. A. [with Moody, I. W.], effect of enteric-coated pancreatin on fat and protein digestion of depancreatised dogs,

A., III, 266.

Selleg, I., and King, C. G., vitamin-C content of human milk and its variation with the diet, A., III, 282.

Sellner, E., and Amer. Bemberg Corp., production of cuprammonium silk by stretch-spinning process, (P.), B., 895. Selter, O., pressure-heat treatment of brown

coal and brown-coal products, B., 1000. Seltz. H. See McAteer, J. H., and Strickler, H. S.

Seltzer, J. M., water-absorption capacity of leather; [American Leather Chemists' Association Committee report, 1937, B.,

Selvig, W. A. See Fieldner, A. C., and Ode, W. H.

Selwyn, E. W. H., and Pitt, F. H. G., factors in design of a photo-electric densitometer requiring no empirical calibration, B., 844.

Selve, H., significance of adrenals for

adaptation, A., III, 388. See also Schacher, J.

Semeikin, B. E., nephelometer-colorimeter with optical compensation, A., I, 331. Universal nephelometer with selenium

photoelemeuts, A., I, 535. Semenenko, N. A. See Kusakov, M. M. Semenoff, S., and Ostro Res. Labs., purified aminophenol salts [aminothymol hydro-

chloride], (P.), B., 420.

Semenov, A. I., Galuinker, I. S., and Kondakov, V. V., burning of anthracite plates for study of water-gas production, B., 746.

Semenova, N., lower limit of inflammation in "oxyhydrogen" gas, A., I, 246.
Sementschenko, V. K., Bering, B. P., and Pokrovski, N. L., surface tension of

amalgams, A., I, 128. Gratscheva, A. F., and Davidovskaja, E. A., buffer phenomena in domain of surface tension, A., I, 234. Surface tension of simple mixtures, A., I, 300.

and Rustamov, A., surface salting-out by electrolytes. IV. Surface saltingout and temperature, A., I, 179.

Semenza, C. See Hoffmann, O.

Semerano, G., thermodynamic treatment of chemical equilibria in systems composed of real gases and its application to the ammonia equilibrium, A., I, 184. Thermodynamics of etherification of alcohols, A., I, 241.

and Bettinelli, G., electrochemical reduction potential of maleic and

fnmario acids, A., I, 245. and Rao, I. S., quantitative microanalysis of mixtures of fumarie and maleic acid, A., II, 477.

See also Meeke, R., and Newitt, D. M. Semet-Solvay Engineering Corporation.
See Angus, L. A., Lindhorst, W., and
Wingert, W. B.

Semichon, L., preparation of liqueur wines, B., 719.

Semmes & Semmes. See Barker, M. E. Semon, W. L., and Goodrich Co., B. F., secondary aromatic amines, (P.), B., 119. Rubber compositions and method of preserving rubber, (P.), B., 474.

Semon, W. L., and Goodrich Co., B. F., secondary amines, (P.), B., 527. Antioxidants [for rubber], (P.), B., 878, 1246. Rubber composition and [antioxidants for] preservation of rubber, (P.), B., 950. Antioxidants, (P.) B., 1314.

Semperit Oesterrisch-Amerikanische Gummiwerke Akt.-Ges. See Metallges. A.-G. Sempio, C., action of certain metals at a

distance, in contact, and in solution on development of *Thelavia basicola*, Zopf, and on that of other fungi, A., III, 181.

Semrau, H., and Bacharach Industrial

Instrument Co., analysis of gases, (P.), B., 997.

Sen, A., rapid determination of soil moisture by drying the soil over a Bunsen burner, B., 1097.

Sen, B. N., formation of Liesegang rings precipitation of basic mercuric chloride in absence of a gel, A., I, 564. Period of induction in the interaction of mercuric chloride with borax, A., I, 570.

Sen, D. C., camphor series. III. Tautomeric behaviour of thiocamphor and the activity of its sodium derivative. IV. Synthesis of thiofenchone and two isomeric bis-thiocamphors and their derivatives, A., II, 26, 381.

Sen, H. D., and Joshi, K. C., insoluble road composition from molasses, B., 915.

Sec also Srivastava, R. C. Sen, H. K., Ghosh, Sudhansu, and Ray, K. L., electrolytic production of pure hydrogen and oxygen under pressure, B., 35.

See also Rangaswami, M.

Sen, M. K., band spectrum of gallium oxide and isotope effect of gallium, A., I, 165. Investigations in the infra-red. Absorption spectrum of boric acid, A., I, 281. Spin doubling in ²Σ states of AlO, A., I, 596. Sen, P. K., injection of individual branches

of a tree which had not been spurpruned, B., 824.

See also Gregory, F. G.

Sen, S. C., application of potassium ferricyanide method for determination of reducing sugars in cane juice, B., 716. and Chaudhury, P. N., increase of blood-calcium after intravenous ad-

ministration of glucose, A., III, 337.

Sen-Gupta, A. K., band spectrum of germanium oxide, A., I, 342.

Sen-Gupta, J. See Chaudhury, S. G.
Sen-Gupta, P. K., photo-dissociation of alkyl halides. II., A., I, 165.
Sen-Gupta, P. N., and Guha, B. C., deter-

mination of total vitamin-O in foodstuffs, A., III, 282.

Senderens, J. B., catalytic decomposition of halogeno-acetic acids in the liquid phase; action of sulphuric acid, A., II, 133. Benzoyl chloride; aromatic ketones, A., II, 343.

Senderova, V. M., volumetric determination of titanium, A., I, 634.

Sendrail, M., and Cahuzac, M., effect of experimental peripancreatic sympathectomy on the basal blood-sugar, A., III,

Sendroy, J., jun., vessels for storage of gases and liquids, A., I, 333. Errors in analysis of chloride in albuminous urine, A., III, 417. Micro-determination of chloride in biological fluids by means of solid silver iodate. I. Gasometric analysis. II. Titrimetric analysis. III. Colorimetric analysis, A., III, 448.

Sengstaken, J. H., heat transfer, B., 1141. Senior, J. K., aspects of molecular asymmetry, A., I, 14.

Senjuta, A. K. See Nikolaev, V. I.

R. H. See Imperial Chem. Sennett, Industries.

Senoo, H. See Ogawa, Toru. Sepalova, O. See Remesov, I.

Serb-Serbin, P. V., and Livschitz, A. M., dolphin oil, B., 1082. Preparation of artificial drying oils from hydroxy-acids,

Serb-Serbina, N. N., adsorption layers in disperse systems. XIV. Surface phenomena in processes of crystallisation; effect of adsorption layers on the localised crystallisation of silver, A., I, 76.

and Dubinski, V. G., adsorption layers in disperse systems. XV. Effect of adsorbed layers on the crystallisation

of calcium sulphate, A., I, 76. Serber, R. See Kalckar, F., and Nordheim, G.

Serdiutschenko, D., almandite from deposits of N. Caucasus and the Ukraine, A., I, 383.

Serdiuvkov, V. A., and Kazantzev, A. D., determination of hydrolytic acidity by various methods on soils of the Sverdlov

region, B., 706. Serdjukov, V. I., cylindrical nickelchromium electro-furnace giving a temperature of 1100°, A., I, 478. Catalyst for oxidation of furfuraldehyde, A., II, 428.

Serdobolski, I. P. See Antipov-Karataiev, I. N.

Serebrennie, V. K. See Alexeevski, E. V. Serebrennikova, M. T. See Belopolski,

Serebriani, S. B. See Kulberg, L.

Serebrianikova, A.G. See Nametkin, S.S.Serebrjakova, E. K., and Frost, A. V., equilibria of reactions between hydrocarbons. X. Equilibrium between nbutylenes and isobutylene, A., I, 240.

See also Dementieva, M. I., and Frost, A. V.

Seredkina, V. A. See Kokaschinski, G. R. Serefis, S., resorption conditions for bismuth: value in oral therapy for syphilis, A., III, 463.

Sereny, B., diffusion in congulated blood-

scrum, A., III, 292.
Serfass, E. J. Sco Theis, E. R.
Sergeev, A. P., mechanism of process of substitution of metals, A., I, 374.

Sergeev, L. I., and Lebedev, A. M., physiological resistance [to salts] of cultivated grasses, A., III, 46.

and Simonova, M. S., determination of m.p. by measuring conductivity, A., I, 330.

Sergeev, S. V., Schreiber, D. S., laboratory furnace for fusion and pouring out of metals in a vacuum, A., I, 478.

Serger, H., preparation of fermented

cucumbers, B., 183. Sergeson, R., and Poole, S. W., low-

temperature impact testing of 0.35% carbon steel, B., 679.

Seri-Holding Société Anonyme. See Cela Holding Soc. Anon.

Serianni, E. See Minz, S.

Serini, A., and Steinruck, K., cestrogenic substance from the demethylation of anethole, A., II, 495. See also Kathol, J.

Seriukov, N. N., determination of arsenic in ores and products, B., 340.

and Vinokurov, M. A., determination of arsenic in ores, concentrates, and other materials, using the Bettendorf-Winkler reagent, B., 1063.

Serko, O. See Kozlov, N.

Serov, V. V. See Lefand, I. L. Serpe, J. See Hautot, A.

Serra, A., mineral waters of the province of Sassari (Ploaghe, Siligo, Thiesl), A.,

Serra, F. S., optimum catalysis conditions in the manufacture of sulphuric acid [by the contact process], B., 901.

Serralles, J. J., jun., comparative efficiency of calcined phosphates [as fertilisers], B., 1384.

Serrano, F. B. See Yenko, F. M.

Serres, (Mlle.) A., thermomagnetic investigation of some cerous salts, A., I, 352.

Serruys, M., theory of nuclear inflammation and knocking in petrol engines, B., 1157.

Sertic, V., inhibiting action of univalent cations on multiplication of a species of bacteriophage, A., III, 100. Effect of electrolytes on development of various strains of bacteriophage, A., III, 100. Inactivation of bacteriophage by bacteria, A., III, 147.

and Boulgakov, N. A., bactericidal action of bacteriophage, A., III, 36. Reversal by acidification of the agglutination by trypaflavino, A., III,

115. Servant, R., birefringence of quartz in far ultra-violet and Schumann region, A., I, 499.

Servantie, L. See Damade, R.

Service, H., igneous rocks from the ironproducing district of Bilbao, Province of Vizcaya, North Spain, A., I, 586.

Servigne, M., luminescence phenomena

relative to production of sensibly white light, A., I, 63. Detection of traces of rare-earth elements, A., I. 328.

and Vassy, É., application of lumin-escence to quantitative analysis: micro-determination of samarium, A., I, 426.

Servy, J., index characterising the dryness factor in agronomy, B., 376.
Seshacharyulu, E. V. See Dhar, N. R.

Seshadri, T. R., and Venkatarao, C., components of Psoralea corylifolia, Linn, A., III, 368.

See also Neelakantam, K., Rangaswami, S., and Rao, P. S.
Seshagiri, P. V. V. See Singh, B. N.

Sesjunin, A. See Karpatschov, S. Sessa, L. See Ferrari, A.

Sessions, R. L. See Mitchell, T. A. Sessous, G., German soya[-bean] cultivation,

B., 823. and Schell, H., manurial trials with

Nettolin in comparison with composts and stall manure, B., 708.

Sestini, Q., puzzuolanas and puzzuolanic cements, B., 552, 914. Puzzuolanie cements and their control, B., 784.

and Santarelli, L., puzzuolana. IV. Analysis, B., 442. Rational use of pumico as light-weight aggregate, B., 554.

Sestu, E., clinical significance of urobilinuria, A., III, 12. Setaschvili, I. See Kandelaki, B.

Sethi, R. L. See Batham, H. N.

Sethna, S. M., Shah, N. M., and Shah, R. C., aluminium chloride, a new reagent for condensation of β -ketonic esters with phonols, A., II, 513. Setkina, O. See Kondrateev, V.

Seto, I., and Ozaki, M., effect of a high-tension electrical discharge on contact catalytic reactions. II. Reduction of nitrobenzene, A., I, 470.

Setter, L. R. See Rudolfs, W. Setterberg, C. T., and Tydéu, E. O. E., concentrating tables for concentrating ores, etc., by the wet process, (P.), B.,

Setterlind, A. N. See Kronenberg, M. H. Settimi, M., toxicity of methyl alcohol, B., 414.

Setz, P. See Thannhauser, S. J. Seuberling, O. See Tropp, C. Seufert, W. See Bersch, H. W.

Sevag, M. G., and Maiweg, L., oximes and their inhibition of catalase action. I., A., III, 30.

Sevelius, E. R. See Virtanen, A. I.

Severac, M. See Raiziss, G. W. Severin, V. A., resynthesis of adenosinetriphosphoric acid in oxidation of a-ketoand -amino-acids in nucleated crythrocytes, A., III, 195.

Severinghaus, W. L., measurement of gas temperature, B., 989.

Sevin, E., influence of a magnetic field on the hydrogen atom, A., I, 7. Zeeman phenomenon, A., I, 54.

Sevtschenko, A. N. Seo Chvostikov, I. A. Sevtzov, A. I., clarification of soda solutions after hot carbonation, B., 1198.

Sewell, R. B. S. See Wiseman, J. D. H.Sewig, R., development of photo-electric cells, B., 693.

Sexl, T., theory of the deuteron, A., I, 7. Scattering of protons by protons, A., I, 58. Estimation of nuclear statistics, A., I. 215.

Sexton, J. P., rolling, polishing, and buffing methods [for metals], B., 688.

Seydel, G. See Volmer, M.

Seydel Chemical Co., alkaline-earth metal double salts of organic acids, (P.), B., 842.

Seyer, W. F., and Cornett, W. F., system SO₂-decalin, A., I, 137.

Martin, K., and Hodnett, L., systems of sulphur dioxide and the isomeric xylenes, A., I, 185. See also Godard, H. P.

Seyewetz, A., use of wetting agents for glazing photographic prints on gelatincoated paper, B., 90. Photographic desensitisers, B., 292. Formation of chemical fogging by presence of small quantities of metallic salts in photographic developers, B., 499. Combination of developers of phenolic function with those of amine function; new combination of o-phenylenediamine and pyrocatechol, B., 499. Production of finegrain images by development followed by intensification, B., 844. Intensification of silver images obtained with a tricolour screen, by mordanting and dyeing, B., 1275.

Seyffarth, H.J. See Jaretzky, R.Seyfried, H. See Fleischhacker, H. Seyler, E. See Balyeat, R. M.

Seymour, G. W., and Celanese Corp. of America, collulose derivative solvents, (P.), B., 214. Seymour, M. W. See Eastman Kodak Co. Sforzini-Pierotti, M. A., emission of positive ions at low temperatures, A., I, 488.

Sgarzi, L. See Amati, A.

Sgonina, C., insecticide, (P.), B., 482. Sha, Y. Y., artificial radioactivity of radio-

phosphorus, A., I, 545.

Shackell, E. M., specificity of action of auxins for the Avena and pea tests, A., III, 241.

Shackell, L. F., elastic limits of plasma gels, A., III, 164.

Shadanovskaja, A. P. See Jurovski, A. Z. Shadduck, H. A., calculation of change in free energy in formation of tricalcium silicate from calcium oxide and β-dicalcium silicate, A., I, 464.

Shadwick, G. W., jun. See Parker, M. E. Shaefer, W. E., determination of glycol or glycerol in dilute solutions containing oxidisable impurities, A., II, 530.

Shafer, L. M. See Crossley, M. L.

Shafer, S., jun., and Chain Belt Co., sludgeremoving apparatus, (P.), B., 5.

Shaffer, P. A., catalysis of ionic oxidationreduction reactions by dyes and its probable mechanism, A., I, 89.

Shaffer, S. S. See Standard Oil Development Co.

Shaffner, S. E., flavours and colours in ico cream, B., 1123.

Shafik, M., and Amer, A. A., efficiency of commercial sedium cyanide and sulphuric acid in liberating hydrocyanic acid gas for fumigation, B., 664.

See also Hosni, M. Shafor, R. W. See Miller, A. L.

Shagalova, R., nonaldehyde and nonyl alcohol, A., II, 228.

Shah, N. M., and Alimchandani, R. L., isomerism of chloralides. I., A., II,

See also Meldrum, A. N., and Sethua, S. M.

Shah, R. C., diaryl-p-nitrobenzamidines, A., II, 192.

and Laiwalla, M. C., synthesis of γ-resorcylaldehyde, A., II, 21.

See also Heeramaneck, V. R., and

Sethna, S. M.
Shah, S. V., preparation of m-dinitrobenzone, A., II, 406.

and Pishawikar, D. G., preparation of m-dinitrobenzene, A., II, 182. See also Kundargi, J. A.

Shahan, F. L., heat filter device, (P.), B.,

Shaligin, A. T. See Orlov, N. A. Shan, H. C., studies of cosmic-ray showers

by quintuple coincidences, A., I, 277. Kisilbasc, B. B., and Ketiladge, D., investigation of cosmic-ray showers at

4000 m. above sea-level, A., I, 545. Shan-Puschkin, M., and Sokolova, M., effect on the oil of drying castor beans, B., 807.

Shand, S. J., rocks of the Kedong Scarp, Kenya Rift Valley, A., I, 482.

Shands, H. L., barley and malt studies. III. Determination of kernel weight, B., 1119.

See also Dickson, J. G. Shane, R. S., washing of textiles, B., 336. Chemical policemen, B., 855.

Shanker, J. See Prasad, M.

Shankland, R. S., Compton effect with y-rays, A., I, 592. Shann, T. A., leaching of lime from concrete,

B., 1345.

Shannon, J. A., relation between excretion of urea and creatinine and rate of urine production in the dog, A., III, 57. Glomerular filtration and urea excretion in relation to urine flow in the dog, A.,

Shannon, W. A. See Rowntree, L. G. Shapiro, A., and Koster, H., effect of bile on excretion of sterol in faces, A., III, 170. Koster, H., Rittenberg, D., and Schoenheimer, R., origin of fæcal fat in absence of bile, studied with deuterium as an indicator, A., III, 254.

Shapiro, B. See Frankel, M. Shapiro, C. L., effect of heat treatment, ageing, and working on condition of carbon in steel, B., 559.

Shapiro, C. S. See Fales, H. A.

Shapiro, E., preparation of pure benzyl acetate, A., II, 189.

Shapiro, H., relative respiratory activity of sheath and axones in resting Limulus optic nerve, A., III, 465. and Butt, C., determining the speed of air-driven centrifuges, A., I. 153.

and Harvey, E. N., tension at the surface

of macrophages, A., III, 193. and Parpart, A. K., osmotic properties of rabbit and human leucocytes, A., III, 450.

See also Brachet, J.

Shapiro, H. A., effect of testosterone propionate on mating, A., III, 230.

Shapiro, M. I., colorimetric determination of adrenaline, B., 840.

Shapiro, R., and Hale, F. E., katadyn treatment of water, with particular

reference to swimming pools, B., 985.

Shapiro, S. Sce Niederl, J. B.

Shapiro, U. G. See Hughes, E. D.

Shapter, R. E. See Trumble, H. C.

Shardlow & Co., Ltd., A., and Wright, H., purification of air, (P.), B., 850.

Share, S., and Breit, G., relativistic effects for the deuteron, A., I, 595.

and Stehn, J. R., effects of long-range forces on neutron-proton scattering, A., I, 489.

Shargorodski, S. D. See Fialkov, J. A.

Sharkova, V. R. See Dintzes, A. I. Sharlit, H., "membrane method" for determining fungicidal action of chemicals: clinical implications, A., III, 181.

Sharma, J. N., and Food Machinery Corp., prevention of decay [in fruits and vegetables], (P.), B., 1405.

Sharma, S. K. See Siddiqui, S. Sharma, V. See Siddiqui, S. Sharov, G. I. See Chimuschin, F. F.

Sharp, C., deoxidation of molten steel, B., 1213.

Sharp, D. E., Bailey, J., and Mississippi Glass Co., heat-absorbing glass, (P.), B.,

Sharp, F. F. See Troy, H. C. Sharp, I. M., mercuration of O-trimethylgallaldehyde and related substances, A., II, 357.

Sharp, J., and Brown Instrument Co., hygrometer, (P.), B., 308.

Sharp, J. G., constitution of myosin and

myogen, A., III, 416. Sharp, P. F., vitamin-C in pasteurised milk, A., III, 78.

and Hart, R. G., influence of physical state of the fat on calculation of solids from the sp. gr. of milk, B., 1120.

and McInerney, T. J., effect of salts on solubility of casein and paracasein, B., 1124.

Sharp, P. F., Myers, R. P., and Guthrie, E. S., accumulation of protein in foam of skim milk, B., 1122.

Stewart, G. F., and Huttar, J. C., effect of packing materials on flavour of

storage eggs, B., 181.

Trout, G. M., and Guthrie, E. S., vitamin-C, copper, and oxidised flavour of milk, B., 833.

See also Krukovsky, V. N.

Sharp & Dohme, Inc. See Daughenbaugh, P.J.

Sharples, E. See West's Gas Improvement Co.

Sharples Solvents Corporation. See Lee,

W. M., and Olin, J. F. Sharples Specialty Co., and Jones, L. D.,

prevention of clogging of conduits for liquids containing suspended sludge, (P.), B., 303.

See also Brewer, N., and Jones, L. D. Sharpless, G. R. See Carpenter, M. D. Shatwell, H. G., developments in coal-tar

distillation, B., 313.

Shaub, B. M., age of uraninite from the Ruggles mine, Grafton Centre, N.H., A., I, 588.

Shaver, W. W., and Corning Glass Works, glass tempering, (P.), B., 1053.
Shavoronkov, N. M. See Kritschevski,

I. R.Shavrigin, P. I., dependence of physical

properties of soils on composition of adsorbed cations, B., 1098.

Shaw, A. E., precision determination of e/m for electrons, A., I, 391.

Shaw, A. O., Bechdel, S. I., Guerrant, N. B. and Dutcher, R. A., effect of breed and plane of nutrition on vitamin-A potency of cow's milk, B., 1265.

Hansen, H. C., and Nutting, R. C., detection of mastitis, A., III, 257.

See also Rasmussen, R.

Shaw, B. D., preparation of 1:5-dioximes from pyridine bases, A., II, 135.

Shaw, Cecil. See Imperial Chem. Industries. Shaw, Clifford, and Shaw, N., artificial stone, (P.), B., 41. Shaw, C. H., and Parratt, L. G.,

satellite lines for elements Zn (30) to Pd (46), A., I, 55.

Shaw, C. P., and Detroit Moulding Corp., ink thinner or vehicle, (P.), B., 1242.

Shaw, D. T., Hsu, T. C., and Chu, S. P., Posan porcelains, B., 241.

H., spray-residue investigations. I. Determinations of arsenic on pears and apples and of copper on logan-berries, B., 824. Fungicidal and phytocidal properties of new chemical preparations. II. Phytocidal properties, B., 826.

and Steer, W., preparation of field-made winter petroleum oil sprays, B., 826. Shaw, H. D. See Gant, V. A.

Shaw, J., ingot mould life, B., 929.

Shaw, J. A. See Koppers Co. of Delaware. Shaw, J. B. See Shaw & Sons (Salford),

Shaw, J. R. See Edmunds, C. W., and Sacks, J.

Shaw, M. B., and O'Leary, M. J., effect of fibre components on stability of book papers, B., 332.

Shaw, M. C., clay refining by flotation methods, B., 1049.

Shaw, N. See Shaw, Clifford. Shaw, P. A., pollution of the Mokelumne river (California) by winery wastes, B., 1413.

Shaw, R., and Wailes Dove Bitumastic, Ltd., incorporation of colloidal fillers in bitumen, far, and similar substances,

(P.), B., 245. Shaw, R. W., vibrational analysis of the emission bands of germanous oxide, A.,

I, 110.

Shaw, T. M. See Alexander, L. T. Shaw, T. P. G., properties of polyvinyl resins as lacquer resins, B., 368.

Shaw, W. M., and MacIntire, W. H., relationship between water-soluble, and fixed fractions replaceable, and fixed fractions of potash additions to soils, B., 1099.

See also MacIntire, W. H. Shaw, Z. See Fisher, M. S.

Shaw & Sons (Salford), Ltd., J., and Shaw, J. B., [press-]moulding of [boxlike] articles from thermoplastic and thermosetting compounds, (P.), B., 814.

Shawinigan Chemicals, Ltd., organic acid anhydride, (P.), B., 417. Acetone, (P.), B., 1312. Vinyl resins, (P.), B., 1373.

Polyvinyl resins, (P.), B., 1373.

Shdanov, V. V., application of Raoult's law to calculation of equilibrium curves for naphthalene in the system coking gas-absorption oil, B., 405. Control of absorption department of nitric acid factories, B., 1042.

Shea, W. J., controlling pollution of Rhode

Island waters, B., 848.

Shead, A. C., angular constants of microcrystalline profiles and silhouettes in conclusive identification of substances, A., I, 45, 630.

Sheard, C., Sanford, A. H., and Rogers, D. A., photelometer, (P.), B., 1075.

Shearer, P. A., and Pardee, A. M., preparation and rearrangement of dialkyl malcates, A., II, 482.

Shearing, E. A., and Smiles, S., derivatives of o-hydroxybenzylsulphonic acid, A., II, 412.

Shearman, R. W., and Menzies, A. W. C., solubilities of potassium chloride in deuterium water and in ordinary water

from 0° to 180°, A., I, 128.

Shebrovski, V., and Sokolov, G., solvents for glyptal resins, B., 1085. Use of castor oil in oil paints, B., 1371.

See also Drinberg, A. Shechmeister, I. L. See Salle, A. J.

Shedlovsky, T., and MacInnes, D. A., determination of activity coefficients from potentials of concentration cells with transference. III. Potassium chloride. IV. Calcium chloride, A., I, 242.

Sheehan, H. L., renal elimination of phenol-

red in the dog, A., III, 132.
Sheehan, W. E., and Carmody, W. H.,

ozoniser, A., I, 153. Kelly, H. E., and Carmody, W. H., indene-coumarone solvent oils, B.,

Sheehy, E. J., mineral metabolism in the calf and addition of inorganic minerals to diet, B., 184. Food value of oat hulls, B., 837.

See also Parkes, J. W. Sheehy, T. M. See Kobe, K. A.

Sheely, M. L., pure fatty acids for grease manufacture, B., 696. Report of the [A.O.C.S.] Soap Analysis Committee, 1936, B., 942.

See also Smither, F. W.

Sheen, R. T., Kahler, H. L., and Cline, D. C., determination of sulphur in rubber; use of tetrahydroxyquinone as a titration indicator, B., 591.

Sheet Polarizer Co. See Land, E. H.

Sheets, O., and Pearson, R. W. [with Summerford, S. D., and Weeks, J. F.], mineral content of syrups, molasses, and soft sugars, B., 828.
Sheets, V. N., treated wood oils, B., 463.

Effect of film thickness, temperature, and humidity variation on the drying of alkyd resin [varnishes and paints], B.,

Sheffield, D. H. See Hercules Powder Co. Sheldak, M. P., and Kurdjumov, G. influence of perpendicular and horizontal strains on the magnitude of X-ray deformations, A., I, 287.

Sheldon, J. M. See Newburgh, L. H. Sheldon & Co., E. H. See Munz, L. E.Sheleznov, A. I., and Maximenko, B. N., production of titanium-aluminium alloys in fused-electrolyte cells, B., 454. Operation of fused-electrolyte cells with an increased charge of alumina, B., 454.

Shell Development Co., and Allen, C. C., mercaptans, (P.), B., 1020. Thio-ethers and saturated hydrocarbons from mercaptans, (P.), B., 1020.

and Belchetz, A., sweetening process, (P.), B., 1162.

Bent, F. A., and Engs, W., dehydration cellulose derivatives, (P.), B., 1191.

and Calderwood, A. H., blending of mineral oils and residues, (P.), B., 1160.

and Carney, S. C., dehydration of organic

compounds, (P.), B., 876. and Deanesly, R. M., tert.-alcohols and products thereof, (P), B., 877.

Evans, T., and Edlund, K. R., recovery of organic acid esters [from esterification mixtures], (P.), B., 877. Alkylated phenols, (P.), B., 1023.

Groll, H. P. A., and Burgin, J., treatment of unsaturated halides, (P.), B., 648. Rearrangement of unsaturated halides, (P.), B., 648. Hydrogenation of unsaturated alcohols, (P.), B., 1171.

Groll, H. P. A., and Hearne, G., conversion of polyhydric alcohols into carbonyl compounds, (P.), B., 649. Unsaturated esters and derived products, (P.), B., 649. Conversion of polyhalogenated alcohols [into alkylene oxides and polyhydric alcohols], (P.), B., 1311.

Groll, H. P. A., and Kautter, C. T., conversion of halogenated alcohols into carbonyl compounds, (P.), B., 649.

Groll, H. P. A., and Ott, C. J., unsaturated ethers, (P.), B., 649.

and Hagenbuch, W., fractionation, (P.), B., 1148.

and Kellogg, O. M., dewaxing mineral hydrocarbon oils, (P.), B., 1012.

Lindeke, H. F., and Greensfelder, B. S., refining of mineral oil, (P.), B., 1161. McAllister, S. H., and De Simo, M., catalytic oxidation of polyhydric alcohols [to ketones and aldehydes],

(P.), B., 1020. and Millar, R. W., hydrocyanic acid, (P.), B., 778.

Moser, F. R., [oil-]sweetening process, (P.), B., 321. Lowering pour point of mineral oils, (P.), B., 1165.

Shell Development Co., Peski, A. J. van, and Smithuysen, W. C. B., separation of one or more components from an aqueous mixture, (P.), B., 1019.

and Pyzel, D., gas cooler, (P.), B., 323. and Reynhart, A. F. A., halogenated organic compounds, (P.), B., 524.

and Rosenstein, L., treatment of [irrigation] water, (P.), B., 506. Recovery of sulphuric acid, (P.), B., 1200.

Ruys, J. D., and Kittle, R. L., inhibitors

[for steel pickling], (P.), B., 799.

Taylor, J. F. M., Greensfelder, B. S., and Shiras, R. N., motor fuel, (P.), B., 1163.

and Williams, E. C., [insect] repellent and fumigant, (P.), B., 626.

Williams, E. C., and Allen, C. C., products [mercaptans, thioethers, and saturated hydrocarbons] from unsaturated compounds and hydrogen sulphide, (P.), B., 1020.

Yabroff, D. L., and Givens, J. W., sweetening a sour hydrocarbon dis-

tillate, (P.), B., 1302.

Shellenberger, J. A., and Bailey, C. H., biochemical distinctions between barley varieties, B., 383.

Shelling, D. H., deterioration of vitamin-D in aqueous solution, A., III, 189.

Shellshear, W. A. See Rogers, W. F. Shellwood – Johnson Co., metal - walled vacuum chambers, (P.), B., 97. See also Schellens, E. L.

Shelton, F. A. See Hester, J. B.Shelton, F. K. See Oldright, G. L.

Shelton, R. See Rider, T. H.

Shelton, S. M., electrolysis of manganese solutions, B., 52.

Shen, S. T., Yao, Y. T., and Wu, T. Y. depolarisation of Raman lines and structure of chlorate, bromate, and

iodate ions, A., I, 218. See also Wn, T. Y. Shenk, W. E. See Larsen, B. M. Shenstone, A. G. See Hoffmann, B.

Shenstone, O. H., and Massey-Harris Co., disc for centrifugal separators, (P.), B.,

Shepard, H. H., Lindgren, D. L., and Thomas, E. L., relative toxicity of insect fumigants, B., 1281.

Shepard, J. H. See Standard Oil Co. Shepard, O. C., and Skinner, C. F., stabilising agglomerated slimes for cyanide leaching, B., 925.

Shepard, S., and Olson, H. C., storage of butter at 0°, B., 388.

Shepherd, A. See Tomlinsons (Rochdale), Ltd.

Shepherd, G. C., jun. See Aldridge, B. G., and Union Oil Co. of California.

Shepherd, H. H., application of science to control of foundry sands, B., 245. Cupola operation, B., 788.

Shepherd, J.~B.~ See Woodward, T.~E.~ Shepherd, T.~C.~R., and Metropolitan-Vickers Electrical Co., fluxes and for electric flux-coated electrodes welding, (P.), B., 1362.

See also Metropolitan-Vickers Electrical Co.

Shepherd, T. L., rubber and similar threads and manufacture of fabrics therefrom, (P.), B., 266, 1092. Rubber[-thread] processes and products, (P.), B., 1379. Shepherd, W. C. F. See Payman, W. Shepherd, W. F. See Mallmann, W. L. Shepherd, W. G. See Williams, John H. Sheppard, F. See Everett, M. R.

Sheppard, S. E., and Newsome, P. T. film formation with cellulose deriv-

atives, B., 1088.
Wilkins, T. R., Wightman, E. P., and Wolfe, R. N., temperature coefficient of photographic sensitivity. II. Effect of low temperature on photographic action of a-particles, A., I, 38.

See also Eastman Kodak Co. Sheppard, S. R., coating and protection of aluminium, (P.), B., 934.

Shera, B., advancement in kraft-pulp bleaching, B., 226. Sherberg, R.O. See Jones, K.K.

Sherbino, M. R., and Midland Steel Products Co., hydraulic fluid, (P.), B., 198.

Sherborne, $J.\ E.$ See Sage, $B.\ H.$ Sheremetiev, $G.\ D.$ See Schpolski, $E.\ V.$ Sherko, $A.\ V.$ See Dintzes, $A.\ I.$

Sherman, A., nature of the hydrogen bond. II. Rôle of resonance, A., I, 170.

Quimby, O. T., and Sutherland, R. O., reactions between ethylene and halogens and their products, A., II, 43.

See also Jones, T., and Owen, J. R.
Sherman, G. W., control of root-knot nematode, Heterodera marioni (Cornu) (Anguillulinidæ), on tuberoses by hot water and vapour heat, B., 602.

Sherman, H. C. See Benedict, F. G., and Speirs, M.

Sherman, J. See Pauling, L., and Taylor, N.W.

Sherman, J. M., and Hodge, H. M., bactericidal properties of certain plant juices, A., III, 359.

and Hussong, R. V., fermentative variability in substances of Streptococcus cremoris and S. lactis, A., III, 182. Sec also Yawger, E. S.

Sherman, M. S. See Markley, K. S., and Milner, R. T.

Sherman, W. C., and Elvehjem, C. A., effect of polyneuritis in chicks on the in vitro rate of removal of pyruvate injected intravenously, A., Ill, 206. In vitro action of crystalline vitamin- B_1 on pyruvic acid metabolism in tissues from polyneuritic chicks, A., III, 280. Anaerobic glycolysis in tissues from polyneuritic chicks: negative action of vita- $\min -B_1$, A., III, 280.

Sherr, R., and Bleakney, W., separation of isotopes by diffusion, A., I, 574.

Sherrard, E. C. See Olson, F. R. Sherrard, G. O. See Parkes, J. W.

Sherratt, G. G., and Griffiths, E., determination of the specific heat of gases at high temperatures by the sound velocity method. II. Carbon dioxide, A., I, 21. Sherratt, J. G., determination of sulphites

in the presence of nitrates and nitrites, A., I, 324.

Sherrill, J. W. See Keeney, E. L.Sherrill, (Miss) M. L., and Smith, J. C., hydration of acetylenes. I. Δ^{θ} -Unde-

cynoic acid (undecolic acid), A., II, 440. Sherwin, A. See Gen. Electric Co.

Sherwin, C. P. See Harrow, B.

Sherwin-Williams Co. See Saunders, H. F., and Todd, J. D.

Sherwood, I. R., ripening of cheese made from raw and pasteurised milk, B., 181. Sherwood, R. M., and Couch, J. R., wheat gray shorts for prevention of slipped

tendons in battery brooder chicks, B., 84. and Fraps, G. S., vitamin-A requirement of hens for egg production, B., 83. Quantities of vitamin-A required by growing chicks, B., 617.

13

Sherwood, R. M. See also Couch, J. R. Sherwood, T. C., relation of season, sex, and weight to basal metabolism of the albino rat, A., III, 207.

Brend, M. A., and Roper, E. A., changes in the vaginal epithelium of the rat on an excessive vitamin-A diet, A.,

III, 280.

Sherwood, T. K., Draemel, F. C., and Ruckman, N. E., desorption of carbon dioxide from water in a packed tower, B., 736.

See also Chambers, F. S., jun., and Hutchinson, M. H.

Sheth, S. M. See Mehta, S. M.

Shewan, J. M., bacteriology of haddock, B., 1263. Bacteriology of "pink" salted fish, B., 1263.

Shibaev, P. N., grain quality of couch grass and wheat-couch grass hybrids, B., 831.

Shibata, F. L. E., and Murata, F., differential dilution of sodium hydroxide solutions, A., I, 619.

Taketa, T., and Imai, S., electrochemical investigation of sodium silicate hydrates, A., I, 365. See also Taketa, T.

Shibata, K., and Tazawa, Y., cleavage of peptide rings by proteinases, A., III, 141.

Shibata, N. See Murakami, T. Shibuya, K., Saeki, H., and Ryu, K., change of oxidation-reduction potentials of water-logged soils. II. Lateritic soils and sandstone soils. III. Humus, alkali, and fish-farm soils, B., 267,

and Torii, T., antagonistic action between potassium and alkaline earths

for plant growth, B., 822. Shicharevitsch, S. A. See Budnikov, P. P. Shields, P. See Hart, C.

Shiffler, W. H. See Standard Oil Co.

Shigadlo, A. V., and Pevzner, L. E., testing of details by means of magnetic powders, A., I, 202.

Shigalin, J. L., selecting maximum pressure in absorption of butadiene, B., 414, 1307. Shigatsch, K. F., methods of measurement of surface tension, and their application,

A., I, 537.

Shigemi, H., metabolism of inorganic salts and water in hepatic disturbances. III.

and IV., A., III, 131. Shih, T. K., and Chow, S. C., alcohol from

kaoliang and maize, B., 1395. Shih, T. M. See Chien, S. L. Shih, Y. K. See King, L. P.

Shina, S., synthesis of higher di-carboxylic acids, CO₂H·[CH₂]_n·CO₂H, CO₂H·[CH₂]_{1n}·CO₂H, and CO₂H·[CH₂]_{1n}·CO₂H, A., II, 483.

Shikata, M., pulp woods of Manchoukuo.

I. Introduction, B., 893. and Fukuwatari, S., relation between absorption spectrum of electromagnetic waves and adsorbed water content; absorption spectrum of electromagnetic waves in wood fibre, A., I, 12. Pulp woods of Manchoukuo. II. Chemical analysis of pulp woods produced in Manchoukuo, B., 893.

Fukuwatari, S., and Shikata, T., pulp woods of Manchoukuo. III. Fibre length of pulp woods produced in

Manchoukuo, B., 893.

and Ogawa, K., pulp woods and rayon pulp. XI. Chemical composition and fibre length of European spruce planted in Hokkaido, Japan, B., 1188.

Shikata, M., and Ogawa, K., tropical wood pulp and pulp cooking. I. Cooking of tropical hard wood, B., 1188.

and Tachi, I., electrolytic reduction potentials of organic compounds. XII. Reduction potentials of p-aminoazo-

benzene, A., I, 415. Shikata, T. See Shikata, M.

Shillito, F. H., and Turner, K. B., effect of iodine on absorption of cholesterol, A., III, 22.

Shimada, T. See Kaziro, K.

Shimadzu, S., stereoscopic photomicro-graphy, A., I, 535. Thickness of silver chloride film produced on the surface of a silver plate, A., I, 553. Fibrous arrangement of micro-crystals of silver chloride, A., I, 603.

Shimasaki, M., gas metabolism of white rats fed fungus growths, A., III, 16. Gas metabolism of white rats fed gelatin, tyrosine, and tryptophan, A., III, 16. Histological changes in endocrine organs of white rats fed tryptophan, A., III, 17. Changes in endocrine glands, especially the thyroid, in white rats fed fungus growths or potassium iodide and tyrosine, A., III, 42.

Shimazu, R., influence of varying conditions on resorption of sodium iodide from muscle. III., A., III, 23.
Shimbo, K., sources of cellulose. V. α-

Cellulose contents of various pulp plants, B., 534.

Shimidzu, G. See Abderhalden, E. Shimizu, T., and Kazuno, T., constitution of trihydroxybufosterocholenic acid and systematic degradation of cholic acid. ., A., II, 20. Toad bile. VI. Constitution of trihydroxyisosterocholenic acid, A., II, 420.

Shimizu, Y., change of magnetic sus-ceptibility in metals during melting and allotropie transformation, A., I,

See also Honda, K.

Shimo, M. See Nakazawa, R. Shimoda, I., and Kamihara, S., mixed solutions of different cellulose derivatives, B., 533.

Shimomura, H. See Fukumoto, J. Shimwell, J. L., relation between staining properties of bacteria and their reaction towards hop antiseptic. I.— III., B., 485, 606.

and Kirkpatrick, W. F., identity of "Bacterium X" (Brown) and "Bacterium C" (Chapman), A., III,

Shinano, S. See Kondo, K. Shindo, T., hydrogen sulphite-hinding substance in human blood in beriberi, A., III, 280.

Shingu, H. See Lauer, K.

Shinkai, S., and Nagata, T., determination of a small amount of manganese in metallic cobalt, B., 1064.

Shinkle, S. D., and U.S. Rubber Co., [asphalt-]coated sheet material, (P.), B., 1194.

Shinn, J. V. See Gen. Chem. Co.

Shinn, L. A., Kane, E. A., Wiseman, H. G., and Cary, C. A., variations in carotene oontent of farm feeds, B., 184.

Shinoda, R., and Inagaki, E., relationbetween viscosity of cellulose acetates and mechanical properties of dopes prepared from them, B., 124. Benzylmannan, B., 331.

Shinoda, S., application of X-ray spectroscopic method to chemical analysis of the rarer elements. V. Determination of samarium in rare-earth mixtures, A., 1, 426.

Shinohara, Kamenosuke, determination of thiol and disulphide compounds, with special reference to cysteine and cystine. VIII. Molecular ratio between Aphospho-18-tungstic acid and cysteine in their colour reaction, A., II, 478.

Shinohara, Ken-ichi, emission of positrons. A., I, 212.

Shinohara, U. See Toriyama, Y. Shinowara, G. Y. Seo Brown, J. B.

Shloiri, M., and Mitsui, S., composition of algo and weeds developing in the paddy field and their decomposition in soil, B., 597.

Shiomi, S. See Kamei, S.

Shiota, R. See Iitaka, L. Shiple, V. See Bayfield, E. G.

Shipley, J. H., Campbell, W. B., and Maass, O., heat content of water sorbed on cellulose, A., I, 364.

Shipman, J., lime-saturation value of Portland cement, B., 674.

Shirahama, K., unsaponifiable matter of algal fats. III. Toxic components, A., III, 503.

See also Takahashi, E.

Shiraishi, T., manufacture of a permeable imitation leather, (P.), B., 1194.

Shiras, R. N. See Shell Development Co. Shire, E. S. See Allen, J. F. Shirley, H. T. See Hatfield, W. H. Shirley, S. C., and Amer. Can Co., enamel

coating for cans, (P.), B., 1376.

Shishido, H., synthesis of domesticine cthyl ethers, A., II, 312, 527.

See also Kitasato, Z. 🕳 Shitnikov, S. G. See Kobeko, P. P.

Shive, J. W. See Arrington, L. B. Shively, W. L., and Harlow, E. V., electrical removal of gum-forming constituents from manufactured gas, B., 201. See also Koppers Co. of Delaware.

Shivotovski, A., inversion of nitrites by oxygen, B., 235.
Shizume, Y. See Sakaguchi, K.

Shlaer, S. See Heeht, S. Shoal, A. T. [with Wolbach, S. B.], rickets in rats. XV. Effect of lowcalcium-high phosphorus diets at various levels and ratios on production of rickets and tetany, A., III, 15.

Shobert, E. I. See Kyropoulos, S.
Shockley, W., electronic energy bands in sodium chloride, A., I, 15. Energy bands for the face-centred lattice,

A., I, 116. . Wave functions in halite, A., I, 552. See also Fisk, J. B., and Slater, J. C. Shoeld, M., and Wight, E. H., treatment

of alcoholic beverages, (P.), B., 1117. Shoemaker, B. H. See Standard Oil Co. Shoemaker, M. J. See Carbide & Carbon

Chemicals Corp., and Schorger, A. W. Shoenberg, D., and Uddin, M. Z., magnetic properties of bismuth. I. Dependence of susceptibility on temperature and

addition of other elements. II. De Haas-van Alphen effect, A., I, 18. Shohl, A. T., effect of acid-base content of dicton production and cure of rickets with

special reference to citrates, A., III, 463. Shôji, H., change of lattice orientation due to allotropic transformation in boracite, leucite, and anhydrous sodium sulphate crystals, A., I, 448.

Shomate, C. H. See Parks, G. S. Shomura, J. See Sakuma, I.

Shonle, H. A. See Doran, W. J. Shoppeo, C. W. See Burton, H.

Shoptaw, L., soya-bean flour as substitute for cow's milk in feeding dairy calves, B., 284.

Espe, D. L., and Cannon, C. Y., gastric digestion of soya-bean flour, A., III,

Shore, A., buffer solutions for determin-

ation of $p_{\rm H}$, A., I, 147. Shorikov, E. A., influence of varying time interval of applying sylvinite on agrochemical properties of soil and yield of

potatoes, B., 709. Shorland, F. B., New Zealand fish oils, B., 1082.

See also Aston, B. C., and Hildltch, T. P. Shornitzki, I. G. See Stender, V. V.

Shorr, E., restoration of carbohydrate oxidation in diabetic tissue in vitro, A., III, 256.

Shorrock, R., grinding mills, (P.), B., 510.

Short, D. M. See Crimm, P. D. Short, J. F. See Distillers Co.

Short, M. N., etch tests on calaverite, krennerite, and sylvanite, A., I, 538. Short, O. See Akerlöf, G.

Short, R. F. See Jackson, R. W.

Short, W. F., and Stromberg, H., totarol. I., A., II, 253.

See also Barger, G., Higginbottom, A., and Hill, P.

Shorter, A. E., and Shorter Process Co., surface-hardening of [articles of] steel or iron or alloys thereof, (P.), B., 1360.
Shorter, A. J. Sec Cox, E. G.
Shorter Process Co., Ltd. Sec Shorter,

A. E.

Shortley, G. H., Fock equations for complex configurations, A., I, 59.

Shoub, E. P. See Smith, G. B. L.

Shoup, C. S., and Meyer, S. L., action of low concentrations of deuterium oxide on course of gas production by brewer's yeast, A., III, 143.

Shrader, L. C. See Griffiths, E. P. Shrader, R. E., widths of the L series X-ray lines and limit of Pb (82), A., I, **541**.

Shreve, R. N., Pritchard, W. N., jun., Farr, H. V., Still, A. J., Crosby, J. D., and Mallinckrodt Chem. Works, soluble salts of barium and strontium, (P.), B.,

Shrewshury, C. L., and Vestal, C. M., nutritive value of packing-house byproducts prepared by the wet and dry rendering processes, B., 185.

Shrikhande, J. G., utilisation of certain forms of inorganic nitrogen during decomposition of plant materials in soil, B., 270. Hot-fermentation process of composting under tropical and subtropical conditions, B., 708.

Shriner, R. L. See Cary, R. C., Condo, F. E., Damsehroder, R. E., and Thurston,

Shrivastava, D. L., and Seal, S. C., preparation and properties of a specific polysaccharide from a strain of Vibrio cholera, A., III, 318.

Shudeman, C. L. B., equivalent electrons and their spectroscopic terms, A., I,

Shney, P. M., indicators in determining free fatty acids in dark-coloured oils, B., 1234.

Shukov, I. I., colloid-chemical properties of sodium divinyl polymerides [synthetic rubber], B., 373.

and Jurshenko, A. I., electro-osmotic researches on diaphragms. II. Influence of tomperature on the transport numbers of ions in diaphragms and on their ζ-potential. III. Electro-osmotic researches on double diaphragms, A., I, 26.

Komarov, V. A., and Gribova, E. I., applicability of the viscosity law of Staudingor to solutions of synthetic rubber, A., I, 177.

Talmud, S. L., and Zilberman, V. A., influence of the nature of the solvent on swelling and solution of sodium butadiene polymerides, B., 1369.

Shukovskaja, S. S. See Budnikov, P. P. Shuman, A. C., and Berry, N. E., determination of sulphate, calcium, and magnosium in salt samples of high purity, A., I, 197.

Shur. See under Schur.

Shuravlev, A. See Bartenev, S. Shuravlev, D. T., critical temperature and

orthobaric densities of diphenyl ether and naphthalene, A., I, 607.

Shuravley, V., and Provorov, V., extraction of rubber from tau-sagiz, B., 1376.

Shurin, A. I., solubility of magnesium in chlorides of magnesium, potassium, and sodium, A., I, 298.

Shute, E., is cestrin the cause of resistance to proteolysis found in serum of aborting women? A., III, 203. Resistance to proteolysis found in blood-serum of aborting women, A., III, 203.

Shutt, W. J., and Rogan, H., "force" method of determining the dielectric capacity of conducting liquids at low frequencies: univalent electrolytes in

aqueous solution, A., I, 131.
Shuttleworth, S. G., tanning, hides, and skins research in South Africa, B., 1380; Shwartzman, G., improvement in biological process [detection and standardisation of toxins and antitoxins], (P.), B.,

499. See also Morell, S.

Shyr, J. See Bray, P. D. Sibaiya, L., nuclear spin of rhodium, A., I, 589.

Sibbald, A. J. See Co-operative Wholesale Soc.

Sibi, M. See Slatineanu, A.

Sibille, R., treatment [roasting] of arsenical pyrites, etc., (P.), B., 909.

Sibley, R. L., and Monsanto Chem. Co., treatment [dyeing] of collulose derivatives, (P.), B., 899. Rubber vulcanisation, (P.), B., 1246. Rubber-treating process, (P.), B., 1380. Vulcanisation of

rubber, (P.), B., 1380. Sibly, T. F., and Reynolds, S. H., carboniferous limestone of the Mitcheldean area, Gloucestershire, A., I, 483.

Sibul, I. See Fleisch, A.

Sice, A., and Mercier, H., dosage of moranyl in treatment of gambiense sleeping sickness, A., III, 257.

Sichert, K., and Bleyer, B., determination of glucose, maltose, and dextrin in sugar mixtures, B., 275.

Sichra, N., and Golomb, L., stable diazocompounds and their application, B., 1026.

Siddappa, G. S., and Adam, W. B., ripening of green peas, B., 492. See also Adam, W. B.

Siddiqui, R. H. See Siddiqui, S. Siddiqui, S., and Sharma, V., conessine series. III. Degradation of conossine and isoconessine hydriodides to a common hydrocarbon. IV. Action of nitrio acid on conessine and the reduction of one of its two isomeric mononitro-derivatives to mono-oxyand isodioxy-conossine, A., II, 527.

Siddiqui, R. H., and Sharma, S. K., conessine series. II. Relationship between N-stability and pharmacological action of conessine and iso-

conessine, A., II, 39.
Siderfin, N. E. See Gas Light & Coke Co.
Sideri, D. I., formation of structure in soil. I. Structure of soil colloids. II. Synthesis of aggregates: bonds uniting clay with sand and clay with humus. Swelling of soil, B., 163, 268, 375.

Sideris, C. P., colorimetric micro-determination of cobalt and potassium, A., I, 264. Colorimetric micro-determination of manganese [in soil or plant extracts], B., ĭ383.

Sldersky, D., history of the rotatory power of sucrose, A., II, 400. Determination of nitrogen in sugar products, B., 175. Reducing power of sugars, B., 380. Normal weights for different saccharimetric scales, B., 963. Saccharimetric scales and their characteristics, B., 963. Drying and ensilage of sugar beet and

pulp, B., 977.
Sidhu, S. S., L spectra of iron above the Curie point, A., I, 159. Collodion filter for Ka chromium radiation, A., I. 535.

and Hicks, V., space lattice and "super-lattice" of pyrrhotite, A., I, 604.

Sidoni, A., jun., protamine insulin versus ordinary insulin, A., III, 230.

Sidorischin, I. I., testing corrosion of welded joints, B., 1219.
Sidorov, N. V. See Dolgov, B. N.
Sidorova, A. A. See Tarassov, V. V.
Sidorova, N. G. See Tzukervanik, I. P.

Sidwell, A. E., jun. See Barron, E. S. G., and Hogness, T. R.

Siebel, C. W., factors in high-pressure design, B., 852.

Siebel, E., and Schwaigerer, S., influence of springing of the machine on occurrence of yield point in the tensile test, B., 928.

Siebel, G., corrosion-resistance of cast hydronalium, B., 145. Corrosion-resistanco of hydronalium, especially to seawater, B., 686.

Siebel, II., dry cooling of coke, B., 1000. Siebenmann, C., refractometric methods for determining total protein, A., III,

Sieber, R., effect of wood density during sulphite digestion on yield and strength

of the pulp, B., 125.
Siebert, G. See Fries, K.
Siebert, M., majolica enamels, their composition and production. II. and III., B., 547.

Siebert, R. See Micheel, F.

Siebert, H. W., adsorption studies with radon, A., I, 611.

and Seffert, H., blood radiation in disease, especially in tumours, A., III, 122.

Siebertz, K., positive column in inert gasmorcury mixtures, A., I, 2. Siecke, W., manufacture of sulphuric acid

by the contact process, B., 1333.

Siedel, W., synthesis of mesobilirubin (mesobilirubin-IXa), A., II, 168.

Siedentopf, H., graininess, variation in density, and capacity for enlargement of photographic negatives, B., 982. Lightscattering in photographic layers. I. Inspection of negatives as positives, B., 1274.

Sieder, E. N., and Tate, G. E., heat transfer and pressure drop of liquids in tubes,

B., 95.

See also Dean, D. K.
Siedler, V. See Janke, A.
Sieg, H. See Oldright, G. L.

Sieg, W. W., welding rod, (P.), B., 148.

Siegel, C. L., design of bubble-cap columns for fractional distillation, B., 1143.

Siegel, O. See Maiwald, K. Siegel, S., and Rosin, S., variation of Young's modulus with magnetisation in permalloy, B., 1215.

See also Quimby, S.L.

Siegert, A., magnetic behaviour of alums of the iron group. II., A., I, 174.

Siegert, H., dependence of performance of vanadium catalyst in sulphuric acid contact process on gaseous impurities and activators, B., 776.
Siegfried, H., determination of air in

bottled beer, B., 719.

Siegle & Co. G.m.b.H., G., chromium

hydroxide green, (P.), B., 437.
Siegmund, E., pressure extraction of bituminous coal, B., 199.

Siehr, A., foaming analysis, A., I, 43. Mechanical properties of foams. II., A., I, 180.

See also Ostwald, Wolfgang. Siehrs, A. E., Gottardo, P., Brazda, F. G., and Miller, C. O., antiscorbutic properties of methyl 2-ketogluconate, A., III, 79.

Sieke, F. See Schwarz, L.

Siemann, J. C., and Du Pont Cellophane Co., coated materials, (P.), B., 1193. See also Charch, W. H.

Siemens & Halske, Akt-Ges., apparatus for electrolytically decomposing water, (P.), B., 55. Preventing separation of solid or semi-solid substances from liquid organic lubricants on cylinder walls of internal-combustion engines, (P.), B., 115. Protective layers on magnesium and its alloys, (P.), B., 359. Circuit arrangements for operating a plurality of [coreless-type] induction furnaces, (P.), B., 583. Sintered magnetisable materials, (P.), B., 690. Sintered hard metal alloys, (P.), B., 692. Permanent magnets, (P.), B., 695. Soldering of ceramic materials, (P.), B., 914. Magnetic dust cores, (P.), B., 1360.

See also Reichmann, R., and Schottky,

Siemens-Lurgi-Cottrell-Elektrofilter-Ges.m.b.H. für Forschung & Patentver-

wertung, apparatus for electrical precipitation of suspended particles from gaseous fluids, (P.), B., 695.

Siemens-Reiniger-Werke Akt-Ges., X-ray apparatus, (P.), B., 461.

Siemens-Schuckertwerke Akt.-Ges., [electrically heated] tunnel kilns, (P.), B., 139. Metal-vapour discharge apparatus, especially mercury-vapour recti-fiers, (P.), B., 694. Binary mixtures [refrigerants] for absorption machines, (P.), B., 992. Sealing of [iron] vacuum vessels, (P.), B., 996.

Siemens-Schuckertwerke Akt.-Ges., apparatus for producing electron streams of great energy, (P.), B., 1364.

Siemers, A. See Elvehjem, C. A.

Siems, H. B., and Swift & Co. Fertilizer Works, fertiliser preparation, (P.), B., 827. Mixing apparatus [for fertiliser], (P.), B., 827.

Sievers, A. F., and Lowman, M. S., menthol content of oil of Japanese mint [Mentha arvensis, var. piperascens, Malinvaud] grown in one locality [of U.S.A.], B., 841.

Sievers, J. F. See Meyer, K. H.Sievert, G. W. See Magraw, D. A.

Sieverts, A., and Danz, W., solubility of deuterium and hydrogen in solid palladium. II., A., I, 75. and Rehm, K., detection of residues of

hydrocyanic acid gas, B., 235.

Sifferd, R. H. See Du Vigneaud, V. Sigal, A., and King, C. G., relationship of vitamin-C to glucose tolerance in the guinea-pig, A., III, 77. Vitamin-C and diphtheria toxin, A., III, 232. Influence of vitamin-C deficiency on resistance of guinea-pigs to diphtheria toxin; glucose tolerance, A., III, 440. Sigal, F. S. See Brusilovski, A. M.

Sigalovskaja, K. K. See Izmailov, N. A.

Sigalovski, K. See Fialkov, J. A.

Sigg, K., action of histamine in comparison with other amines and ammonia on the frog and on frog's heart; chemical constitution and pharmacological action, A., III, 424.

Sigler, G., and Du Pont Rayon Co., artificial

thread, (P.), B., 1192. Sigmund, R., denatured spirit in vinegar factories, B., 1395.

Signer, R., and Sadron, C., deformation of dissolved polystyrene molecules on

streaming, A., I, 79.
Sigworth, E. A., activated carbon—its value and proper points of application [in water purification], B., 848. Activated carbon in oil and fat purification, B., 1076.

See also Harris, J. P.

Sihvonen, V., capacity for reduction of the keto-group on graphite, A., I, 38. Application of the Volmer equation of state to derivation of the Langmuir adsorption isotherm, A., I, 358. Universal cell for electrolysis, A., I, 428. A working electrode of pure carbon does not produce an electrolytic gas cell, A., I, 619. Mechanism of electrolysis, A., I, 620. Reaction mechanism of electrolytic oxidation of tartaric acid, A., II, 48.

and Lindroos, E., effect of platinising on electrochemical oxidation of Ceylon graphite in sulphuric acid solution,

A., I, 573. Sik, K. See Szebelledy, L. Sil, K. M., Roy, G. C., and Das-Gupta, P. N., separation of lead from copper and their subsequent determination, A.,

Silbereisen, K., carbohydrates of yeast, A., III, 271. See also Rothenbach, E.

Silberg, A. See Tanasescu, I. Silberman, A. See Kapustinski, A. F. Silberman, D. E. See Levy, Milton. Silbermintz, V. A., and Bonstedt, E. M.,

diamond from new deposit in the Syuren river basin (Bashkir), A., I, 52.

Silberstein, F., Engel, P., and Molnar, K., occurrence of cestrogenic substance in blood and tissues under pathological conditions. VI. Comparison of amounts in blood and organs. VII. Destruction of menformone in blood and organs, A., III, 40.

Silberstein, L. See Bertrand, G. Silbert, S. See Friedlander, M. Silcocks, C. G. See Travers, M. W.

Silika- & Schamotte-Fabriken Martin & Pagenstecher Akt.-Ges., refractory ware, (P.), B., 441, 1342.

Silin, P. M., rôle of colloids in the sugar industry, B., 276. Physico-chemical phenomena in extraction of sugar juices, B., 960.

Silin, S. F. See Lebedinski, V. V. Silitschenko, E. I. See Rapoport, I. B. Siller, C. W. See Aston, J. G.

Sillers, D. A., contacting of liquid and gas, (P.), B., 741.
Sillifant, R. R., spraying of steel by the

wire-fed metal-spraying pistol, B., 1061. Silliman, H. F., beryllium-copper alloys,

and Amer. Brass Co., resistance welding

electrode, (P.), B., 692. Silman, H., metallic soaps, B., 156. Silsbee, F. B., superconducting state, A.,

I, 403. Scott, R. B., and Brickwedde, F. G.,

new phenomenon in superconducting transition of tantalum and tin, A., I, 292.

Silsby, C. F. See Gen. Chem. Co. Siltschenko, G. F. See Fedorov, A. S. Silver, R. S., ignition of gaseous mixtures by hot particles, A., I, 247.

Silvette, H. See Britton, S. W.

Simakov, P. V., zinc content of muscles of various animals, A., III, 197. Seo also Gorodisskaja, G.

Simakova, L. T. See Antipov-Karataiev, I. N.

Siman, J. See Kallauner, O.

Simanovskaja, A. A. Seo Schorigin, P. P. Simanovskaja, A. V. See Kozlov, V. V. Simanton, W. A., [official method for]

evaluating liquid insecticides, B., 1281. See also Richardson, C. H.

Simard, R., recent and future developments in petroleum refining, B., 640.

Simazakai, K. See Fuseya, G. Simcox, I. J., Peek, R. L., and Internat. Nickel Co. of Canada, smelting of [copper-nickel sulphide] ores, (P.), B., 580.

Simek, B. G., reactivity of coke, B., 312. and Coufalik, F., preparation of active coke from tar, B., 311. Causes of reactivity of coke, B., 744.

Coufalik, \tilde{F} ., and Helm, J., composition of coal-tar pitch distillates, B., 1296. and Ludmila, J., electrochemical separ-

ation of non-superheated lignite tar, B., 106. Simeon, E., variable-slit filter for liquids,

A., I, 636.

Simeon, F. See Twyman, F. Simeon, M. K. See Norris, E. R.

Similan, L. G., and Noel Associates, Inc., quickproof process film, (P.), B., 500.

Simmie, W. S. See Pressed Steel Co. Simmonds, B. G. See Fox, H. M.

Simmonds, F. A. See Seborg, C. O. Simmons, C. C., and Franseen, C. C., diagnostic value of phosphatase determinations in study of bone tumours, A., III, 122.

Simmons, R. H. See Kantrowitz, M. S.

Simms, B. T. See Rodenwold, B. W. Simms, H. S., and Stillman, N. P., substances affecting adult tissue in vitro. I. Stimulating action of trypsin on fresh adult tissue. II. Growth inhibitor in adult tissue. III. A stimulant (the "A" factor) in serum ultrafiltrate involved in overcoming adult tissue dormancy, A., III, 221, 309.

and Stolman, A., changes in human tissue electrolytes in senescence, A., III, 454.

Simms, J. C. See Hovorka, F

Simola, P. E., Jalas, S., and Ylinen, E., determination of true vitamin-C content, A., III, 45.

and Kalaja, T., hydrolysis and synthesis of cholesteryl esters in the animal organism, A., III, 67.

and Närvänen, R., reactions of preg-

nancy urine, A., III, 57. and Puutula, K., decomposition of a-keto-acids in the animal organism, A., III, 212.

and Rivas, L., occurrence of melanophore hormone-like substances in urine, A., III, 42.

and Ylinen, E., true vitamin-C content of the animal organism, A., III, 155. See also Krnsius, \bar{F} . E.

Simomura, M. See Yamasaki, I.

Simon, Aanette, and Staub, A. M., liberation of histamine-like substance in allergic reactions caused by arsenobenzene in the guinea-pig, A., III, 339.

See also Bovet, D.

Simon, Alexander, and Zsoldos, P., pharmacology of the principal alkaloids and of mixtures of total alkaloids of cinchona bark, A., III, 27.

on, Arthur [with Fröhlich, H.], hydrogels. XIII. System mangan-Simon, ous oxide-water, A., I, 360.

and Fehér, F., constitution of acids of elements of group V and their salts. I. H₃PO₄, H₃PO₃, H₃PO₂, and their salts, A., I, 167. Simple projector for measuring weak spectral lines, A., I, 201.

W., active iron. VIII. ue reaction. IX. Reand Haufe, Prussian-blue reaction. IX. Reactions with 2:2'-dipyridyl and o-

phenanthroline, A., I, 94. Haufe, W., Reetz, T., and Preissler, R., active iron. VII. Ferric salt catalase, A., I, 94.

Morgenstern, G., and Albrecht, W. H., active iron. X. Magnetic characterisation of the ferric monodipyridyl complex and the magnetism of complex ferrous pentacyanides, A., I, 174.

and Reetz, T., active iron. XI. Catalysis by ferric salts in the systems oxalic acid-hydrogen peroxide and oxalic acid-mercuric chloride-hydrogen peroxide, A., I, 251.

and Reuther, H., Raman spectrum of anhydrous perchloric acid, A., I, 496.

and Schulze, G., Raman spectra of the compounds POCl₃, PSCl₃, PO(OMe)₃, and PS(OMe)₂, A., I, 598.
Simon, E., and Weizmann, C., acetone-

butyl alcohol fermentation, A., III, 433. Simon, F., range of stability of the fluid state, A., I, 123. See also Kürti, N.

Simon, F. A., species-non-specific antigenic factor in mammalian sera, A., III, 115.

See also Sulzberger, M. B. Simon, F. R. See Simon, W. G. Simon, H. See Kolbach, P.

Simon, I., occurrence of bromine in thyroid gland of animals treated with large amounts of bromide, A., III, 176. Rapidity of absorption of neutral atropine sulphate from the conjunctival sac in relation to osmotic pressure of the solution, A., III, 179. Osmotic pressure of organs. II. Osmotic pressure of kidney, blood, and urine following intravenous injection of water or hyper- and hypo-tonic solutions of pharmaceutical substances, A., III, 263. See also Groh, J.

Simon, K., characteristic humus substances, their determination and significance in stall manures, B., 271.

Simon, M. See Decoux, L.

Simon, O., treatment of cavities in decayed teeth before stopping, (P.), B., 626. Simon, W. See Standard-I. G. Co.

Simon, W. G., and Simon, F. R., drying machines of the heated roller type, (P.), B., 300.

Simon, Ltd., H., and Brian, J. C., blending or mixing of grain or other materials, (P.), B., 98. Mixing machines for powdered, granular, and similar materials, (P.), B., 305. Mixing machines for powdered or granular, and similar materials, (P.), B., 305. Lockwood, J. F., and Watts, G., con-

ditioning of grain, (P.), B., 1129. Simond, A. E. See Rowe, L. W.

Simonds, R. C., pasteurising of cream, (P.), B., 391.

Simonin, P., and Pierron, A., toxicity of fluorine derivatives, A., III, 95.

Simonis, H., and Wojack, G., syntheses in the indene series, A., II, 457.

Simonis, W., dependence of osmotic value of plants of different ecological groups on soil-water content, B., 597.

Simonnet, H., fate of morphine in the animal organism, A., III, 305.

Guittonnean, G., Mocquot, G., Eyrard, A., effect of pasteurisation in absence of air on nutritive value of milk, B., 1260.

See also Demanche, R. Simonova, M. S. See Ismailski, V. A. Simonova, M. S. See Sergeev, L. N.

Simons, C. See Kon, G. A. R. Simons, E. J. H., and Zucker, T. F., antirachitic substance from tunny-liver oil, A., II, 100.

Simons, F. L., and La Monte & Son, G.,

safety paper, (P.), B., 431.
Simons, J. H., and Block, L. P., fluorocarbons, A., II, 362.

Simons, J. K., condensations of aromatic amines with formaldehyde in media containing acid. IV. Conversion of diarylaminomethanes into substituted dihydro- and tetrahydro-quinazolines in non-aqueous media, A., II, 185.

Simons, L., and Zuber, K., production of positive and negative electron pairs in a cloud chamber, A., I, 437.

Simons, O. F. See Standard Oil Co. Simonsen, J. L., turpentines, B., 467. See also Adamson, P. S., Bradfield, A. E., Lewis, J. R., and Ramage, G. R. Simonson, R. W. See Truog, E.

Simpkin, N., and Wrapson, G., inflammability of dusts from Lancashire coals, B., 859.

Simpkins, G. W. See Edisbnry, J. R. Simpson, A., means for hot-storage, drying, low-temperature cooking, etc., (P.), B.,

Simpson, E. S., rickets in sheep, A., III, 462. Simpson, Edward S., mineralogy of W. Australia. X., A., I, 585.

Simpson, G. See Thomson, J. S. Simpson, G. L. See Moore, W. E. Simpson, G. S. See Gen. Chem. Co.

Simpson, J., barium minerals, B., 795. Simpson, J. C. E., constituents of senega root. I. α-Spinasterol, A., II, 339. Structure of β-boswellinic acid, A., II, 463.

and Williams, N. E., ether-soluble constituents of sarsaparila root. I., A., II, 289.

Simpson, J. F. H., precise distribution of Mercurialis perennis according to soil $p_{\rm H}$, B., 710.

Simpson, K. M., and Banister, R. T., alloys of copper and iron, B., 44. Simpson, L. E., sifters, (P.), B., 856.

Simpson, N. M. See Baker, W.

Simpson, O. C. See Estermann, I., and Halpern, J.

Simpson, R. M. See Hutchins, W. D. Simpson, T. P. See Kalichevsky, V. A. Simskaja, A. M., utilisation of waste

products of potato-starch factories for acetone-butyl alcohol fermentation, B., 486.

Sinani, S. S., and Chudjakov, V. N., system Na₂CO₃-K₂CO₃-H₂O at low temperatures, A., I, 82. See also Bergman, A. G.

Sinclair, A. T., and McCalla, A. G., influence of lipins on quality and keeping properties of flour, B., 968.
Sinclair, H. M.,

clair, H. M., growth factors for Phycomyces, A., III, 432. See also Kögl, F.

Sinclair, K. J., manurial value of synthetic urea, B., 1101.

Sinclair, R. D., causes of soft bacon, B., 1262.

Sinclair, R. G., and Smith, C., turnover of phospholipins in the intestinal mucosa, A., III, 468.

See also McConnell, K. P.

Sinclair, W. B., and Bartholomew, E. T., diastatic activity of orange leaves as affected by time, temperature, $p_{\rm H}$, and certain zinc salts, A., III, 313.

Sinclair Refining Co. See Barth, E. J., Beardsley, W. H., Herthel, E. C., Isom, E. W., Johnson, W. W., Kaasa, O. G., Ringgenberg, H. I., Robertson, H. J., and Vobach, A. C.

Sinden, J. W., and Pennsylvania Res. Corp., mushroom spawn, (P.), B., 716.

See also Pennsylvania Res. Corp. Sindlinger, F. See Herrmann, Rudolf. Singer, A. A. See Rockwood & Co.

Singer, E., effects of vitamin-E deficiency on thyroid gland of the rat, A., III, 156.

See also Rowlands, I. W. Singer, F., acid-resisting industrial filters. II. Porous filters, B., 400.

Singer, O., distinguishing between bleached and unbleached wood pulp, B., 226.

Singh, A., report of Imperial Agriculturist; Agricultural Section, Pusa. VI. Field experiments, B., 377. See also Narain, R.

Singh, B., and Ahmad, G., hydrolysis of uranyl salts, A., I, 517.

and Ilahi, I., potentiometric studies in oxidation-reduction reactions. I. and II. Oxidation with potassium iodate, A., I, 263, 578.

and Malik, I. I., potentiometrio studies in oxidation-reduction reactions. III. Reduction with sodium sulphite, A.,

Singh, B. K., and Mishra, B., physical identity of enantiomerides. Raman spectra of d- and l-camphoric acids and -camphoric anhydrides, A.,

Narayan, K., Sinha, P., Prasad, H., and Chatterji, N., physical identity of enantiomerides. III. Viscosities, of enantiomerides. densities, and refractivities of d-, l-, and dl-forms of oximinocamphor (stable and unstable), camphor, camphoric acid, camphoric anhydride, camphorquinone, and sodium eamphorate, A., I, 453.

and Sud, M. R., substituted quaternary azonium compounds. V. Molecular phenyldimethylazonium, state of phenylmethylethylazonium phenyldiethylazonium, phenylbenzylmethylazonium, and phenylbenzylpropylazonium iodides in dilute solution, A.,

I, 513.

Singh, B. N., effect of soaking seed cane in solutions of different p_H, B., 1104. Kapoor, G. P., and Choudri, R. S., growth [of plants] in relation to ultraviolet radiation, A., III, 48.

and Mathur, P. B., apparatus for measurement of shrinkage coefficient of soils,

B., 376.-

and Rao, N. K. A., changes in chloro-plast pigments in leaves during senescence, A., III, 500. Seshagiri, P. V. V., and Gupta, S. S.,

response of the respiratory system in mango and guava to alterations in concentration of oxygen and nitrogen, A., III, 285. Ontogenetic drifts in physiology and chemistry of tropical fruits under orchard conditions, B., 1103.

and Singh, B. R., growth and water requirement of crop plants in relation to soil moisture, B., 272.

and Singh, S. N., analysis of Crotalaria juncea with special reference to its use in green manuring and in fibre production, B., 170.

Singh, B. R. See Singh, B. N.

Singh, D., and Nijawan, S. D., base-exchange studies [in soils]. I. Effect of certain cations saturating exchange complex of the soil on its physico-chemical properties, and their relation to plant growth, B., 268. Singh, G. See Joshi, S. S.

Singh, I., effects of pulmonary gas embolism, Ă., II<u>I</u>, 109.

Singh, J., soil fungi and Actinomyces in relation to manurial treatment, season, and crop, B., 954. Soil bacteria of the sub-tropical region-Punjab, N. India, В., 1383.

Singh, Mahan, and Singh, Manohar, optical activity and chemical constitution. III. Optically active acids and bases, A.,

Singh, Manohar. See Singh, Mahan.

Singh, S. N. See Singh, B. N. Singleton, G., [arsenic and lead on sprayed citrus fruits], B., 481.

Singleton-Green, J., pumice as an aggregate for concrete, B., 1344.
Sinha, K. L. See Baneriee, K.

Sinha, P. Sec Singh, B. K. Siniakova, S. I., determination of small concentrations. XIII. Determination of

benzene, A., II, 92.
Siniramed, C. See Ubaldini, I.
Sinjakov, N. I., colour pyrometer for measurement of high temperatures, A., I, 479.

Sinkinson, E., and Michaelson, S. D., flotation of California magnesites, B., 50. Sinn, F. See Borsche, W.

Sinnatt, F. S., gas industry and the consumer, B., 313.

King, J. G., and Macfarlane, A., hydrogenation [of coal and low-temperature tar], B., 514.

Sinton, J. A., and Majid, S. A., dispersion of anopheline larvæ by flow of streams: preventive effect of larvicides, B., 1414.

and Wats, R. C., efficacy of insecticidal sprays in destruction of adult mosquitoes, B., 504. Sintschuk, V. E. See Boguslavski, I. M.

Sioto Ges.m.b.H., enamels, glazes, etc., (P.), В., 140.

Sipovski, G. V. See Znamenski, A. V. Sirear, A. C., and Chowdhury, D. C., acenaphthenequinone series. III., A., II, 170.

and Guha, S. C., condensation of furil and furoin, A., II, 170.

Sirkar, S. C., Raman effect at low temperature: phosphorus trichloride, cyclo-hexane, and chlorobenzene, A., I, 282. Intensity of Raman lines due to intermolecular oscillations, A., I, 598.

and Gupta, J., Raman spectra of different modifications of crystals, A., I, 167. Crystal structure of solid hydrogen sulphide, A., I, 400. Crystal structure of p-dichlorobenzene at different temperatures, A., I, 604.

Sirokomski, V. S., and Pilnik, R. S., gravimetric determination of small quantities of tin in minerals by means of phenylarsinic acid, B., 570.

and Stepin, V. V., phenylanthranilic acid as a redox indicator, A., I, 200. Application of N-phenylanthranilic acid to simultaneous determination of vanadium and chromium, and to determination of iron in ores, A., I, 264. Determination of chromium in presence of vanadium in titanomagnetite ore, B., 1065.

Siron, sodium carbonate liquid purification process at Brussels gasworks, B., 106. Coke ovens heated by mixed gas, B., 1295. Sirot, A., and Gaucher, G., culture of early

crops in dry soil on the Algerian coast, B., 708.

Sirot, M. See Alquier, I.

Siruček, J. See Cupr, V. Sisakjan, N. M., rôle of phosphates in accumulation of sugar in the sugar beet, A., III, 159. Enzymic activity of living plant cells in relation to "vernalisation" of seeds. I. Effect of vernalisation on invertase action, A., III, 239. Direction of enzyme action as index of drought-resisting properties of cultivated plants. I. Action of invertase in drought-resistant and non-resistant varieties of wheat, A., III, 430.

See also Rubin, B. A.

Siskin, M., Kondrateev, V., and Snschkevitsch, T., photochemical activity of quartz mercury arc towards the reactions $CO + O_2$ and CO + NO, A., I, 193.

See also Kondrateev, V.

Sisley, J. P., hydrocarbonaceous soaps, B.,

Sismey, D., coal and its suitability for glass-furnace heating, B., 513. Sisoev, B., iron alloys, B., 679.

Sisson, W. A., identification of crystalline cellulose in young cotton fibres by X-ray diffraction analysis, A., III, 322. X-ray analysis of textile fibres. V. Relation of orientation to tensile strength of raw

orientation to cotton, B., 1319.

Sitharaman, M. V., and Rengachari, S.,

Perovidases. IV. Determination of peroxidase activity from e.m.f. measure-

ments, A., III, 392.

Sitnik, E. P. See Sokolov, V. I. Sitnik, Z. P., and Steingardt, B. S., dicarboeyanines with substituents in the

chromophore, A., II, 38.

Sitsch, E. D. See Kiprianov, A. I.

Sittard, J. See Bankloh, W.

Sitte, K. See Bertl, E., and Fürth, R.

Sivaramakrishnan, P. M. See Damodaran, M.

Sivertzev, I. I. See Gramenitzki, M. I. Siveretkin, G. S. See Bobko, E. V.

Siwe, S., chemical changes in blood in tetany due to parathyroid deficiency and on administration of parathormone, A., III, 322.

Sixtus, K. J., remanence in single crystals, A., I, 351. Powder patterns on ferromagnetic crystals, A., I, 399. Coercive force in single crystals, A., I, 556.

Sizer, I. W., kinetics of catalysed sugar hydrolysis as a function of temperature,

A., III, 482.

Sizoo, G. J., disintegration energy of artificial radioactive nuclei, A., I, 276. Energetic stability of isobaric nuclei, A., I, 391.

and Coumou, D. J., γ -radiation of the uranium-X complex, A., I, 4. and Koene, C. P., period of radioactive phosphorus ??P., A., I, 59.
See also Dols, M. J. L.

Sizova, A. G. See Osanov, B. P.

Sjoerdsma, W, influence of temperature on fine structure of the X-ray K absorption edge of iron, A., I, 105.

Sjostrom, O. A., and Internat. Patents Development Co., bleaching of starch, (P.), B., I394.

Skala, F., ageing of regenerated transformer oils, B., 111.

Skallan, W., existence of an azoligase, A.,

Skalmowski, W., emulsification phenomena as a cause of disintegration of bituminous coatings, B., 676.

Skalov, B., and Sokolik, A., function of electrically-charged particles in propagation of flames. I. Propagation of flames in a transverse electric field, A.,

Skarre, O. K., Demidenko, S. G., and Brodski, A. E., density and molecular volume in solution. I. Method of density measurement and the molecular volume of dissolved carbamide, A., I, 302.

Skarstrom, C. See Beams, J. W. Skarzynski, B., metabolism of sterols during development of hen's eggs, A., III, 91.

Skaupy, F., and Weissenberg, G., vitreous quartz objects, B., 1338.

Skeen, J. R., and Ward, A. L., prevention of [gas-]holder discoloration, B., 1002. Skeens, H. C., painting ship surfaces, B., 810.

Skelton, C. H. See Freeman, H. Skelton, W. E. See Texas Co.

SKF Industries, Inc. See Styri, H.

Skibbe, A. M., removal of spray residue from pears, B., 724.

Skibina, E. M., rapid determination of granulometric composition of ceramic powders and masses, B., 440.

Skilbeek, D. See Watson, J. A. S.

Skiles, B. F., and Hamilton, C. S., arsenicals containing the dibenzfuran nucleus, A., II, 356.

Skill, D. I. See Odell, A. D. Skinner, A. J. See South Metropolitan Gas Co.

Skinner, C. F. See Shepard, O. C.

Skinner, G. S., conditions affecting the formation of malonates and barbituric acids; halogenoalkyl derivatives, A., II,

Skinner, H. J., significance of water [in the pulp and paper industry], B., 770. Skinner, H. W. B., and Johnston, J. E.,

fine structure of soft X-ray absorption edges. I. Lithium, magnesium, nickel, copper, A., I, 540. M emission bands of zinc, copper, and nickel, A., I, 541.

Skinner, J. J., Mann, H. B., Collins, E. R., Batten, E. T., and Bledsoe, R. P., adapting high-analysis and concentrated fertilisers to cotton soils, B., 1253.

See also Bledsoe, R. P.

Skinner, K. G., coke-carbon dioxide relations, B., 861.

See also Wilson, Hewitt.

Skinner, L. B., superphosphates, (P.), B., 134.

Skipin, A. I., obtaining vegetable oils, B., 58.

Skirstimonskaja, V. I., influence of superposition of an alternating current on electro-deposition of zinc and copper, A., I, 419.

Sklar, A. L., theory of colour of organic compounds, A., I, 547

Sklovskaja, O. M., and Gildovskaja, Z. S., rapid analysis of cadmium electrolyte, B., 453.

Skobelzyn, D. V., anomalous phenomena in the scattering of fast \(\beta\)-particles, A., 1, 275.

Skobetz, E. M. See Izbekov, V. A. Skoblinskaja, S. A. See Schorigin, P. P. Sköldkvist, H. N., boards of fibrous or pulverulent substances of vegetables origin, (P.), B., 30.

Škola, V., decomposition of mullite, B., 545, 670.

Skoog, F., desceded Avena test method for small amounts of auxin and auxin precursors, A., III, 106.

Skopintzev, B. A., and Pletnikova, E. I., prevention of extraction of silicic acid by natural waters stored in glass vessels, A., I, 576.

Skopnik, von, bituminous road construction during 1936, B., 1209.

Skorko, E., absorption of iodine vapour at high temperatures, A., I, 1.

Skotnický, J., temperature coefficients of single electrode potentials, A., I, 83.

Skovholt, O., and Bailey, C. H., effect of milk solids on fermentation reactions, B., 386.

Skowronska, J. See Czochralski, J. Skowronski, F. J. See Universal Oil Products Co.

Skrahal, A., kinetics of consecutive reactions with a common reactant, A., I, 246. Stoicheiometry of simultaneous reactions, A., I, 365.

and Berger, A., kinetic determination of dissociation constant of hypochlorous acid, A., I, 362.

and Leutner, R., depolymerisation process in formaldehyde solutions, A., I, 366.

Skrabal, R., Raman effect. LXXIII. Derivatives of the three- and four-ring, A., 1, 497.

See also Förster, G., Kohlrausch, K. W. F., Pestemer, M., and Reitz, A. W.

Škramovský, S., and Vondrášek, O., bismuth sulphates, A., I, 576. See also Splichal, J.

Skramstad, H. K., and Loughridge, D. H., primary ionisation of high-energy electrons in nitrogen and neon, A., I, 4.

Skramtaev, B. G., reconditioning Portland cement deteriorated by prolonged storage, B., 242.

Skraup, S., fat metabolism, A., III, 62. Skrjabin, A. K., theory of motion of anomalous liquids, A., I, 607.

Skroch, K. See Monden, H.

Skrodel, L., effect of method of milking on secretion of milk and fat, B., 1260. Influence of speed of milking on yield and butter fat content [of milk], B., 1261. Skrnipnikov, K. A. See Braschnik, N. I.

Skrzynecki, J. Sco Urbański, T. Skvirska, E. B. Sco Epelbaum, S. E.

Skvortzov, A. A., Maslennikov, S. P., and Schmutov, I. I., specific heat of high-

speed steel, B., 351. Skvortzova, A. A. See Kaplan, S. I. Sky, J. D. See Vickers-Armstrongs.

Slachman, P. G. See Rhodes, F. H. Slack, A. D. See Eastman Kodak Co., and Kodak, Ltd.

Slack, C. M., and Ehrke, L. F., simple equipment for electrolysing heavy water, A., I, 153. 200 kv. neutron source, A., 1, 428.

Slagh, H. R. See Dow Chem. Co. Slagle, W. J., and Dewey & Almy Chem. Co., friction padding material, (P.), B., 742

Slagter, A. J., MacKay, C. W., and Ohio Oil Co., treatment of [hydrocarbon] oil,

(P.), B., 521. Slanina, S. J., and Hennion, G. F., alkylacetylenes and their addition compounds. XX. Reactions of alkenyl esters derived from alkylacetylenes, A., II, 272.

Slaschtschev, A. S., flash points of vegetable oils, B., 806. Recovery of castor oil from spent clarifiers, B., 1081.

Slater, C. S., Holmes, R. S., and Byers, H. G., trace elements in soils from erosion experimental stations, with supplementary data on other soils, B., 593. Slater, E. J., and Champlin Refining Co.,

oil-refining process, (P.), B., 1303. Slater, I. G. See Brit. Non-Ferrous Metals

Res. Assoc. Slater, J. C., superconducting state. I. and II., A., I, 174, 504. Damped electron waves in crystals, A., I, 387. Wave functions in a periodic potential, A., I, 387. Ferromagnetism: lowest energy levels, A., I, 504.

and Shockley, W., optical absorption by the alkali halides, A., I, 8.

Slater, S. A. See Imperial Chem. Industries.

Slatineanu, A., Balteanu, I., Nitulescu, I., Franke, M., Sibi, M., Veith, E., and Naftalis, I., auto-intoxication in pellagra, A., III, 125.

Balteanu, I., Sibi, M., and Levit, R., intestinal chemistry in pellagra, A., III, 125.

Slattenschek, A. See Leon, A.

Slatter, W. L., changes in acotylmothylcarbinol plus diacetyl content of butter, B., 180.

Slaughter, D. Sco Plant, O. H.

Slavich, E., and Torrini, A., changes in blood-amino-acids due to ingestion of glucose by normal and diabetic men, A., III, 13.

See also Dogliotti, G. C.

Slavina, S. E. See Batalin, V. S. Slavinski, K. See Dupont, G.

Slavinski, M. P., Edelson, L. R., Wol, A. E., and Zamoruev, C. M., casting of steel ingots in moulds with metal sheet coatings, B., 558.

Schaschin, A. V., and Filin, N. A., remelting and effect of additions on oxidation of components of lead babbitts, B., 50.

Zedin, N. I., Konstantinov, A. K., and Kusmarzev, P. G., phenomenon of inverso segregation in brasses, B., 569. Slawson, C. B., high iron tourmaline from

the Marquette iron range, A., I, 537. Slaymaker, R. R., air separation of minorals. I. Historical development, B., 628.

Slayter, G., strength and physical properties of fine glass fibres and yarns, B., 37.

Sleesman, J. P., controlling insects in muck crops, B., 170.

Sleeth, C. \bar{K} ., and Liere, E. J. van, effect of various degrees of anoxemia on secretion of acid and chlorides by the stomach, A., III, 298. See also Liere, E. J. van.

Sleptzov, E. A., coal pyrites as raw material for production of sulphuric acid, B., 901.

Slesareva, M.S. See Stefkin, F.S.Sligh, H. F. See Critz, P. F.

Sligin, A. See Frumkin, A. Sligher, V. M. Sco Adel, A. Slizkovskaja, O. A., measurement of low temperatures, B., 855.

Šljivić, S., and Nikolić, D., photochemical sensitivity of mercuric nitrate, A., I,

Sloan, A. W., and Goodrich Co., B. F., antioxidant [for rubber, etc.], (P.), B.,

Sloan, D. H. See Smith, F. F. Sloan, E. C., and Hawley, J. B., joined fibrous bodied article, (P.), B., 772.

Sloane, R. G. See Standard Oil Development Co.

Slobodin, J. M., isomerisation of alleno hydrocarbons by silicates. III. Isomerisation of tetramethylallene. Tautomorism in the system allenepropylene, A., II, 174. Slobodnik. See Zilberman, G. B.

Slobodskaja, T. M., determination of

nitrogen in Kuznetski-basin coals by titration of ammonium salt in presence of formalin, B., 404.

Slobodskoi, J. J., determination of arsenic in gases, B., 341.

Slobodskoi, R. R., graphical analysis of

action of cyclone separators, B., 508. Slocum, E. M., adsorbent clays, (P.), B., 551.

Sloep, A. C., and Ripa, R., standardisation of pectin analysis, B., 974.

Sloman, H. A. See Stevenson, W. W. Sloman, H. J., and Barnhart, A. C., relative grindability of coal, B., 101.

Slon, M. See Urbanski, T. Slonim, C. See Herrmann, Z.

Slottman, G. V., hydrocarbon fuel gases for cutting [steel], B., 1352.

Slowter, E. E., and Gonser, B. W., gases for controlled atmospheres in heat treatment of steel. II., B., 1060.

Sluckaja, M. M., Scherschever, J. M., and Brodski, A. E., exchange reactions of hydrogen with deuterium. III. Exchange in amino-groups, A., I, 574. See also Filippov, N. S.

Sluzkaja. See under Sluckaja.

Sly, C. See Du Pont de Nemours & Co., E. I.

Smadel, J. E. See Farr, L. E.Smagina, Z. V. See Salkind, J. S.

Small, J. B., and Gliddin Co., bituminous emulsion, (P.), B., 41.

Small, L. F., ethers of morphine and its dihydrogenated derivative, (P.), B., 1408.

and Turnbull, S. G., structure of bromomorphine, A., II. 474.

Small, P. A., equilibrium between hydrogen sulphide and heavy water, A., I, 462. and Wolfenden, J. H., exchange reactions of heavy water with organic compounds. I. Phenol, acetanilide, and the formate ion, A., I, 87.

Small, T., control of potato blight in Jersey, B., 481.

Smallfield, H. A., chocolate-flavoured milk, B., 1122.

Smallwood, H. M., viscosity of raw rubber, B., 1090.

Smallwood, W. C. See Parsons, L. G.

Smare, D. L. See Lowery, H. Smarin, A. I. See Rodionov, V. M.

Smart, A., power supply for electroplating, with particular reference to rectification, B., 146.

Smart, C. F., cadmium-silver-copper alloys for engine bearings, B., 922.

Smart, H. F., and Brunstetter, B. C., spinach and kale in frozen pack. I. Scalding tests. II. Microbiological Scalding tests. studies, B., 973.

Smedberg, G. E. See Seeber, R. R.Smeets, C., compound of dioxan with

perchloric acid, A., II, 72.

Smekal, A., absorption and energy bands of alkali halido crystals, A., I, 8. Theory of rupture of brittle bodies, A., I, 70. Influence of specimen width on breaking strength of sheet glass, B., 137. Nature of mechanical strength of glass, B., 137. Fatigue fracture and brittle fracture, B., 451. Theoretical foundations of grinding [brittle substances], B., 735.

See also Kidani, Y.

Smellie, J. See Bryan, A. M. Smetana, O. See Thomas & Co., R.

Smethurst, P. C., mercury hypersensitisation, B., 845.

Smeyers, F., ensilage of forage plants, B., 977.

Smiałowski, M., mechanism of compression and recrystallisation in zinc, A., I, 605. Distribution of impurities in metal crystals, B., 1217.

Smidth & Co., A./S., F. L., hardening of surfaces of asbestos-cement products, (P.), B., 556. Coloured asbestos-cement products in sheet form, (P.), B., 556, 1345.

Smiles, J., and Wrighton, H., micrography of metals in ultra-violet light, A., I, 330. Smiles, S. See Evans, W. J., McClement, C. S., and Shearing, E. A.

Smirnov, A. A., influence of anharmonic thermal oscillations of atoms on electric resistance of metals, A., 1, 11. Behaviour of glass electrode at different temperatures, A., I, 414. Smirnov, A. I., liquid used in manometric

determination of the oxygen index characterising degree of fermentation of yellow types of tobacco, B., 840.

[with Moroz-Morozenko, M. G.], gaseous exchange in aqueous suspensions of oriental tobacco. I., B., 187.

Smirnov, B. A. See Falkevitsch, A. S. Smirnov, E. A. Sec Ismailski, V. A.

Smirnov, K. A., colorimetric determination of hydrogen sulphide in air, B., 1138.

Smirnov, L. V., and Bashenov, N. M., dependence of scattering of light on

wave-length, A., I, 112. Smirnov, N. D., bromine and iodine content of water from the Kuibischev region oil-wells, A., I, 636. Vivianite as a phosphatic fertiliser, B., 166. Fineness of grinding of raw phosphates [fertilisers],

B., 596. Nophelite as a fertiliser, B., 707. Smirnov, P. V., Schevliagina, N. K., and Vinogradov, D. G., influence of admixture of oxygen to nitrogen on nitrification of

calcium carbide, B., 1199.
Smirnov, V. I., rational composition of pyrites clinker from different levels of the oven, B., 1045.

and Aidinjan, N., determination of ferrous oxide in rocks and minerals, A., I, 376. Smirnov, V. F. See Mandelstam, S. L.
Smirnov, V. V., influence of reduction of height of Charpy samples on the impact-

resilience value, B., 399.

Smirnova, A. See Chalas, G.

Smirnova, E. I. See Roshanski, N. A. Smirnova, E. V. See Sveschnikov, A. T.

Smirnova, L. G. See Charin, S. I. Smirnova, N. V. See Kazanski, B. A. Smirnova, S. See Petrov, G.

Smit, J., modern sewage purification, B., 397.

Smith, A. D., cracking of hydrocarbons, (P.), B., 19.

and Jenkins Petroleum Process Co., treatment of hydrocarbons, (P.), B.,

Smith, A. E., and Fowler, R. D., lowvoltage source of ultra-violet continuum, A., I, 331.

Smith, A. F. See Clark, G. S.

Smith, A. H., and Orten, J. M., nutritional and metabolic significance of certain organic acids, A., III, 469.

See also Eppright, E. S., Orten, J. M.,

and Winnek, P.S.Smith, A.H.R. See Henderson, V.E.

Smith, A. J. See Brick, R. M. Smith, A. J. M., uptake of water by grains of maize, A., III, 80.

and Gane, R., water relations of pea seeds, A., III, 80. Determination, electrically, of temperature, and oxygen and carbon dioxide content of gases, (P.), B., 363.

Smith, A. L., and Harris, M., nature of the acid-dyeing process, B., 1039. Aciddyeing [of wool], B., 1326.

See also Harris, M. Smith, A. M. See Lauder, A.

Smith, B., and Nevill, T., Northern Wales, A., I, 206.

Smith, B. H., modern trends in flavours, B., 1128.

Smith, B. W., and Todd Co., Inc., safety

paper, (P.), B., 230. Smith, C. See Sinclair, R. G. Smith, C. E., Reid, W. J., jun., Harrison, P. K., and Bare, C. O., arsenic dusting of cabbage in relation to poison residues, B., 822

Smith, C. H. See Wingfoot Corp. Smith, Charles L. See Appleman, C. O. Smith, Clyde L., Annable, W. G., and Pure Oil Co., fractionally distilling and desulphurising crude oil, (P.), B., 19.

See also Watson, C. B.

Smith, Cyril L. See Gilbert, C. W. Smith, C. M. See Gooden, E. L., and Goodhue, L. D.

Smith, C. R., compounds of bentonite with organic bases, (P.), B., 220.

Smith, C. S., [selenium-]copper alloys, (P.),

B., 1227. and Amer. Brass Co., copper-selenium alloys, (P.), B., 691. Copper-silicon-sclenium alloys, (P.), B., 691. See also Davis, C. H., and Kempf,

Smith, C. W. See Farr-Vulcan Process Co. Smith, D. C. See Penniman, W. B. D. Smith, D. E., and Czarnetzky, E. J., evaluation of mercurial antiseptics in

presence of scrum, A., III, 359.

Sec also Eagle, H. Smith, Donald Milton, and Bryant, W. M. D., determination of anhydrides

of carboxylic acids, A., II, 129. Smith, Donald Murgatroyd, spectrographic

analysis of tin, B., 48.

Smith, D. P. See Moore, G. A. Smith, D. T. See Barrett Co. Smith, D. W. See Mehl, R. F.

Smith, E., and Ryall, A. L., removal of lead, arsenic, and fluorine [spray] residues [from apples], B., 389.

Smith, E. C. B., effect of fatigue on postmortem changes in muscle, A., III, 423. Smith, E. C. W. See Lunt, R. W.

Smith, E. E. See Pallister, P. R.

Smith, E. G. See Fellers, C. R. Smith, E. H., chemical engineering in the

heavy-leather industry, B., 1094. See also Jansen, G. V.

Smith, E. K. See Edwards, D. V. Smith, E. Lester. See Anderson, F. W. Smith, Edwin L. See Holck, H. G. O.

Smith, Emil L., influence of light and carbon dioxide on photosynthesis, A., III, 367.

Smith, E. R., and Matheson, H., difference in at. wt. of oxygen from air and water, A., I, 57.

and Wojciechowski, M., b.p.-composition diagram for dilute aqueous solutions of deuterium oxide, A., I, 184. B.p.-composition diagram of the system dioxan-water, A., I, 296.

See also Wojciechowski, M. Smith, E. R. B., and Smith, P. K., activity of glycine, A., I, 136.

Smith, E. S., jun., fluid measurement and control, B., 854.

Smith, E. T., pottery, (P.), B., 1053. Smith, E. V., wild onion control with

creosote-kerosene spray, B., 1254. Smith, E. W. See Hodgson, H. H.

Smith, F. See Haworth, W. N.

Smith, F. A., and Stern, D. C., apparatus for separating solids from liquids, (P.), B., 401.

See also Lott, W. A.

Smith, F. B., occurrence and activities of fungi in Iowa soils, B., 1384. Humus: formation of humus and decomposition of organic matter in soil, B.,

Brown, P. E., and Millar, H. C., effects of carbon dioxide on decomposition of organic matter and accumulation of

nitrates in soil, B., 376.

Brown, P. E., Millar, H. C., and Bodily, H. L., effect of carbon dioxide on soil reaction and on solubility of phosphorus in soils, B., 477.

See also Millar, H. C. Smith, F. C. See Rabinovitsch, I. M.

Smith, F. E., plant for production of petrol by hydrogenation of bituminous coal, B., 200.

Smith, F. E. A., chemical sterilisation of dairy equipment, B., 179. Use of washing powders in milk plant, B., 280.

Smith, F. F., Dailey, M. E., and Sloan, D. H., distribution of bromide in bloodserum and spinal fluid, A., III, 113.

Smith, F. H. See Du Pont de Nemours & Co., E. I.

Smith, F. R. See Rule, H. G. Smith, G. B. L., and Shoub, E. P., nitroguanylhydrazones of aldehydes and ketones, A., II, 483.
See also Fuller, L. P., and Lieber, E.
Smith, G. E., and West, T. F., constituents

of the oil of Abies balsamea, Miller; a source of l- β -phellandrene, B., 1133, 1407.

Smith, George E., autumn and spring applications of nitrogen fertilisers to

apple trees, B., 600.

Smith, G. Frederick, improved design of Rodgers ring burner, A., I, 48. Standard mixed chloride samples; effect of ball-mill grinding and mixing on the actual analyses as compared with calculated values, A., I, 424. and Croad, G. F., anhydrous sodium

carbonate as a standard of reference in acidimetry; stability of sodium carbonate in the temperature range 300-400°, A., I, 260. and Getz, C. A., rate of dehydration of

ethyl alcohol using metallic calcium, A., I, 190. Determination of chromium in ferrochrome; phosphoric acid as solvent with mixed perchloric and sulphurie acids as oxidant, B., 1062.

and Ring, F., preparation, aqueous and perchloric acid solubilities, solution densities, and transition temperature

of silver perchlorate, A., I, 611. and Sullivan, V. R., electron-beam sectrometer; line-operated vacuumtube titrometer for potentiometric titrations with cathode-ray tubo replacement of the micro-ammeter, A., Ī, 267.

Sullivan, V. R., and Frank, G., hexanitratoammonium cerate as a proposed reference standard in oxidi-

metry, A., I, 149. and Wilcox, C. S., Wood's metal reductor, A., I, 583.

Smith, Gilbert F., heats of activation in mutarotation of glucose. I. Catalysis in sodium hydroxide solutions, A., I,

and Smith, Mercia C., heats of activation in mutarotation of glucose. II. Catalysis by water, acids, and bases, A., I, 524.

Smith, G. M. See Allen, E. Smith, G. O. See Bell Telephone Labs. Smith, G. Stanley, iodometric determination of alkali, A., I, 531. Co-ordination compounds of semicarbazide, phenylsemicarbazide, m-tolylsemicarbazide, and aminoguanidine, A., II, 404. Volumetric determination of semicarbazide and aminoguanidine, A., II, 477.

Smith, Glenn S. See Fifield, C. C. Smith, G. van S., and Kennard, J. H., progestin and æstrin of nineteen placentas from normal and toxemic

cases, A., III, 437. and Smith, O. W., increased estrogenic potency of human urine after hydrogenation, A., III, 417.

Smith, H. B. See Eastman Kodak Co. Smith, H. C. See Newport, C. L.

Smith, H. D., structure of cellulose, B., 1185.

Smith, Harry E., and New York Central Railroad Co., apparatus for reclaiming packing waste and oil therefrom, (P.), B., 19.

Smith, Harry Edward, and Snell, F. D., mirrors, (P.), B., 241.

Smith, Herbert G., new lamprophyres and monchiquites from Jersey, A., I, 270. Smith, Herschel G., experimental solvent

[oil] extraction tower unit, B., 1004. and Gnlf Oil Corp. of Pennsylvania, refining of petroleum oils, (P.), B.,

Smith, H. M., and Grandone, P., ethylene, (P.), B., 1309.

Grandone, P., and Rall, H. T., pyrolysis of methane [to benzene], (P.), B., 1313.

See also Rall, H. T. Smith, H. W. See Bunin, J. B.

Smith, J. See Outhouse, J.

Smith, J. A. B., dairy science; physiology of dairy cattle. I., A., III, 172. See also Aylward, F. X., and Channon,

H.J.

Smith, J. B., [determination of] magnesium in fertilisers, B., 956.

and Schlenker, F. S., optimum soilnitrate levels for table beet: their effects on certain nitrogen fractions in juice expressed from the leaves, B., 272.

Smith, J. C., "peroxide" or "oxygen" effect, A., II, 438.

See also Abraham, E. P., Harris, R. M., and Sherrill, (Miss) M. L.

Smith, J. D., eradicating roadside weeds, B., 481.

Smith, J. E. See Lenher, S. Smith, J. F., heat-transfor and pressuredrop data for an oil in a copper tube, B., 1141.

Smith, J. F. O., thermal conductivity of liquids, A., I, 22.
Smith, J. G. See Thornton, W. M., jun.

Smith, J. H., Cohen, H. T., and Humphreys & Glasgow, Ltd., carbonisation of fuel, (P.), B., 1008.

Smith, J. L., feeding device for boiler compound, B., 987.

Smith, K. M., air-borne plant virus, A., III, 227, 276.

Smith, L. See Pearce, J. N. Smith, L. A. (Albany). See Wadsworth, A.

Smith, L. A. (Rochester, N.Y.). See Brooker, L. G. S.

Smith, Leighton B., Beattie, J. A., and Kay, W. C., compressibilities of liquid and gaseous normal heptane and an equation of state for gaseous normal heptane, A., I, 558.

Smith, Lloyd B. Seo Cerf, M. E. Smith, L. E., insecticide, (P.), B., 959. See also Fink, D. E.

Smith, L. G., ionisation and dissociation of polyatomic molecules by electron

impact. I. Methane, A., I, 209. and Bleakney, W., ionisation potentials of H₂, N₂, CH₄, and H₂O, A., I, 591.

See also Bleakney, W., and Smith, P. T. Smith, L. H. See Barger, G., Campbell, W. G., and Robinson, R.

Smith, L. I., and Guss, C., polymethylbenzones. XVI. Enolising action of magnesium methyl iodide hindered ketones, A., II, 293.

and Johnson, K. C., reaction between quinones and sodium enolates. VII. Bromo-ψ-cumoquinone and sodioma-

lonic ester, A., II, 255. and Pings, W. B., action of diazomethane on duroquinone, A., II, 380.

Taylor, F. L., and Webster, (Miss) I. M., polymethylbenzenes. XVIII. Action of nitric acid on bromodurene, A., II, 338.

and Tenenbaum, D., reaction between quinones and sodium enolates. VI. Duroquinone and sodioacetoacetic ester, A., II, 255.

and Webster, (Miss) I. M., reaction between quinones and sodium enolates. V. 2:3-Dimethylnaphthoquinono and sodiomalonic ester, A., II, 255.

Webster, (Miss) I. M., and Guss, C., polymethylbenzenes. XVII. Aceto-

pentamethylbenzene, A., II, 342. See also Moyle, C. L.

Smith, L. J., emulsified lacquers for porous materials, B., 1088. Smith, L. L., fluorescent sodalite, A., I,

483. Smith, L. M., and Goldsmith, E. V.,

cyclamen mite, Tarsonemus pallidus, and its control on field strawberries, B., 604. Smith, L. P., and Carlock, H. A., universal

ion source, A., I, 583.

Smith, M. See Anglo Pencil Co.

Smith, M. A., and Goldsworthy, M. C., life cycle and control of Fabraa maculata on Kieffer and Garber pears, B., 1106.

Smith, M. C., alloying for wear- and corrosion-resistance, B., 1353.

Smith, Margaret C., effect of storage on vitamin-A content of lucerne hay, B., 390.

and Otis, L., sex variations in the utilisation of iron by anæmic rats, A., III, 122. Hæmoglobin regeneration in anemic rats in relation to iron intake: bioassay technique for measuring available iron, A., III, 459. Effect of adding copper to the exclusive milk diet used in the preparation of anæmic rats, on their subsequent response to iron, A., III, 475.

and Roehm, G. H., biological value of proteins in hegari and supplemental value of protein concentrates used in farm animal feeding, B., 616.

Smith, Marsden C., developments in raw water preparation and use of chlorinated copperas at Richmond, Va., B., 192.

Smith, Mercia C. See Smith, Gilbert F. Smith, M. D., phosphatase test applied to Ontario milk, B., 1260.

Smith, M. E., and Pollard, C. B., derivatives of quinoline. I. Nupercaine analogues. I., Å., II, 123.

Smith, M. I., pharmacological action of tuberculoprotein in normal and tuberculous animals, A., III, 25.

Stohlman, E. F., jun., and Lillie, R. D., toxicity and pathology of selenium, A., III, 427.

Westfall, B. B., and Stohlman, E. F., jun., elimination of selenium and its distribution in the tissues, A., III, 479.

Smith, M. L., "bite" test as a measure of the particle size of powders, B., 987. Measurement of proportions of calcite and aragonite in precipitated chalk, B., 1044. Effect of particle characteristics on abrasiveness of fine powders, B., 1052.

Smith, M. R., distribution of the Argentine ant in the United States; its control or

eradication, B., 73.

Smith, N., estimation of performance of vacuum pans, B., 96. Clarification notes: test for comparing the brightness of limed [sugar] juices, B., 275. Hot and cold liming [of sugar juice], B., 1109. Smith, (Miss) N. E. See Crook, E. M.

Smith, N. M., jun. See Hoag, J. B. Smith, N. O. See Campbell, A. N.

Smith, O., potato nutrition and soil fertility studies in 1935, B., 598. Effect of soil reaction on growth, yield, and market quality of potatoes, B., 835.

and Moore, G. C., effect of soil reaction on yield and market quality of potatoes,

В., 599.

Smith, O. H., and U.S. Rubber Co., halogenation of hydrocarbons, (P.), B., 327. Smith, O. L. See Ramage, A. S.

Smith, O. W. Sec Smith, G. van S. Smith, P. K., effect of sodium hydrogen carbonate on antipyretic action and toxity of acctanilide, A., III, 23.

Trace, J., and Barbour, H. G., fate of deuterium in the mammalian body, A., III, 21. 131 71 53 4

See also Smith, E. R. B.

Smith, P. R., and Barber Asphalt Co., bituminous emulsion, (P.), B., 350. and Central Commercial Co., [granular] surfacing material, (P.), B., 350.
Smith, P. T., Lozier, W. W., Smith, L. G.,

and Bleakney, W., high-sensitivity mass spectrograph with automatic recorder, A., I. 202.

Smith, R. See Hodgson, H. H.

Smith, R. A. [with Rosen, J.], migration. of alkyl radicals. I. Transfer of tert .alkyl radicals from phenols to hydrocarbons, A., II, 287. See also Niederl, J. B.

Smith, R. C., and Howard, H. C., aromatisation of cellulose by heat, B., 424.

See also Juettner, B.

Smith, R. D., metallurgical needs of the glass industry, B., 544. See also Taylor, W. C.

Smith, R. E. See Schriever, W.

Smith, R. G., road emulsions and their new uscs, B., 443.

Smith, Ralph G. See Horst, K.

Smith, R. L., phosphate rock as a filler substitute in fertiliser mixtures, B., 1384. Smith, R. L. H., testing of lubrication and

wear, (P.), B., 997. Smith, R. M., and Marble, A., colorimetric determination of free and combined

cholesterol, A., III, 162.

Smith, R. N. See Taylor, G. R. Smith, R. P., waste-heat boilers in openhearth practice; report II of the Open-Hearth Committee, B., 444.

Smith, R. T., filter and liquid and gas separator, (P.), B., 741.

Smith, S. See Buttle, G. A. H., and Stewart, C. P.

Smith, Sydney, and Timmis, G. M., alkaloids of ergot. VIII. New alkaloids of ergot: ergosine and crgosininc, A., II, 219.

See also Welcome Foundation, Ltd. Smith, S. R. N., and Cooper, C., [roller] mills for grinding paints and other substances, (P.), B., 401.

Smith, T., oxides of iron, B., 1237.

Smith, T. P. See Smith, Stone, & Knight,

Smith, V. C. See Hottel, H. C. Smith, Watt. See O'Kelly, A. A.

Smith, Wilfred, comparison between the adsorptive action of kaolin and kaolin-alumina mixture on fæcal bacteria, A., III, 225. See also Evers, N.

Smith, William, Ritchie, M., and Ludlam, E. B., photo-expansion of bromine, A., I. 599.

Smith, Wilson. See Laidlaw, P. P.

Smith, W. C., influence of solvent on saponification value of rosin, B., 1370. See also Frey, R. W.

Smith, W. H., low-temperature storage of plums, B., 1264. Cooling and storage of strawberries, B., 1264.

Smith, W. H. (Washington), and Saylor, C. P., secondary increase of length of stretched chilled rubber, B., 591.
Smith, W. L., and Carpenter, A. W.

relation between laboratory tests and service life of rubber hose and belting, B., 702.

Smith, W. M., Miller, D. W., and Vapor Car Heating Co., mercury column thermostat, (P.), B., 738.
Smith, W. R. See Kistiakowsky, G. B.

Smith, W. V., Brown, O. L. I., and Pitzer, K. S., heat capacity and entropy of silver nitrate from 15° to 300° abs; heat and free energy of solution in water and dilute aqueous ammonia; entropy of silver ammonia complex ion, A., I, 464.

See also Brown, O. L. I. Smith, W. Whitney. See Zobell, C. E. Smith, Willie W. See Bunin, J. B., Smith Co., T. L. See Rybeck, A. W.

Smith Corporation, A. O., iron-chromiumaluminium alloys, (P.), B., 1250.

See also Larson, L. J., Martin, W. G., and Walker, W. O.

Smith, Stone, & Knight, Ltd., and Smith, T. P., [elongated] bodies or articles from pulp or other fibrous material, (P.), B., 896. Smith-White, W. B. See Love, W. H. Smithburn, K. C. See Sabin, F. R.

Smithells, C. J., new [tungsten] alloy of high density, B., 573. Permeability of metals to hydrogen, B., 928.

and Ransley, C. E., diffusion of gases IV. Diffusion of through metals. oxygen and of hydrogen through nickel at very high pressures, A., I, 129. See also Fowler, R.H.

Smither, F. W., Divine, R. E., Long, C. P., Sheely, M. L., Trevithick, H. P., and Walker, P. H., sampling and analysis of commercial soaps and soap products: revised, B., 365. Smithers, V. L., and Winkelmann, H. A.,

plastic composition, (P.), B., 1240. Smithson, $F_{\cdot,\cdot}$ outgrowths on zircon in the Middle Jurassic of Yorkshire, A., I, 482.

Smithuysen, W. C. B. See Shell Development Co.

Smits, A., and Moerman, N. F., dielectric constant of liquid sulphur trioxide, A., I, 221. Internal changes in the system sulphur trioxide. II., A., I, 231.

Moerman, N. F., and Pathuis, J. C., dipole moment of sulphur trioxide, A.,

I, 221.

and Muller, G. J., low-temperature transformation of heavy ammonium chloride, A., I, 352. Transformation of solid ammonium iodide between -58° and -40°, A., I, 450. Binary systems in which one component exhibits a heterogeneous transform-A., I, 462. Melting of mercury, A., I, 505. ation with heterogeneous hysteresis,

Smock, R. M., calcium cyanamide and its decomposition products; physiological studies, B., 70. Effects of wax treatments on varieties of apples and pears, B., 614.

Smoczkiewiczowa, A. See Hrynakowski, K. Smolens, H. G. See Clark, J. A.

Smolenski, K., and Kozlowski, W., rotatory power of alkaline solutions of sucrose, A., I, 236.

and Werkenthin, M., single liming [of sugar juice] with theoretical amount

of lime, B., 173.
Smolina, L. V. See Zaprometov, V. G.
Smoliar, V. O. See Borshkovski, S. E. Smoluchowski, R., optical investigation of thin gold foils, A., I, 555.

See also Bouckaert, L. Smoot, C. C., and Frey, R. W., Western hemlock bark as potential tanning material, B., 951.

Smorodincev, I. A., ripening of meat, B., 182.

and Bebeschin, K. V., changes in total nitrogen and lipin contents of the brain of oxen with age, A., III, 87, and Bistrov, S. P., effect of freezing on

the swelling of viands, B., 835.

and Feldt, A. M., separation of thyro-globulins, A., III, 252. Dissociation constant of thyroglobulin, A., III, 403. Isoelectric point of thyroglobulin, A., III, 403.

and Krilova, N. N., electrical conductivity and surface tension of meat extracts, B., 82.

Krilova, N. N., Nikolaeva, N. V., and Passonina, V. J., influence of stunning by electric current on quality of meat of large animals, B., 82.

Krilova, N. N., and Passonina, V. J., changes of protein fractions in meat ripening, B., 723.

and Nikolaeva, N. V., modification of cathepsin in autolysis of muscular tissue, A., III, 32.

and Pavlov, S. A., mechanism of action of neutral salts on protein, A., III, 340. Determination of [amino-acid] coefficient D, A., III, 374. and Rein, L. M., determination of water content of blood, A., III, 373.

and Tsyganova, P. A., buffering action of meat extracts and the coefficient D, B., 82.

Volfertz, V. J., Krilova, N. N., Nikolaeva, N. V., Liaskovskaja, J. N., and Passo-V. I., relationship between organoleptic and physicochemical and chemical indicators of ripe meat, B., 1125.

Smouse, J. P., taste and odour problems at St. Joseph, Mo., B., 849.

Smullen, C. \hat{H} . See Tweedy, W. R.

Smyer, S. J. See Abernethy, J. W.Smyly, A. L., hard-surfaced cement, (P.), B., 41. Oxidation of iron, (P.), B., 1047. Iron oxide, (P.), B., 1047, 1337*.

Smyth, C. P., bond moment and electronegativity, A., I, 223.

and Baker, W. O., rotation of some long[-chain] molecules in the solid

state, A., I, 499. Smyth, E. M. See Meyer, Karl, and Palmer, J. W.

Smyth, H. T., intensity measurements in arc spectrum of copper, A., I, 540.

Smyth-Homewood, G. R. B. See Davies, C. Smythe, C. V., phosphoric acid esters from yeast extract; isolation of a crystalline calcium salt consisting of an equimolecular mixture of glucose monophosphate and glycerophosphate, A., III, 98. Preparation of hexose monophosphate from yeast extract, A., III, 271.

See also Michaelis, L.

Smythe, W. R., adjustable vacuum leak, A., I, 50.

and Hemmendinger, A., radioactive isotope of potassium, A., I, 160.

See also Hemmendinger, A. Snapp, R. R. See Rusk, H. P.

Snapper, I., and Grünbaum, A., immunology of the thyroid problem, A., III, 152. Snavely, B. L., secondary processes of ionisation in mercury vapour, A., I, 488. Snell, A. G. See Ashdown (Birmingham), Ltd., H. E.

Snell, A. M. See Wilder, R. M. Snell, E. E., Strong, F. M., and Peterson, W. H., growth factors for bacteria. VI. Fractionation and properties of an accessory factor for lactic acid bacteria, A., III, 487.

Tatum, E. L., and Peterson, W. H., growth factors for bacteria. III. Nutritive requirements of Lactobacillus

delbrückii, A., III, 316.

Snell, F. D., heat transfer with non-inflammable organic compounds, B., 195. Treatment of fibreboard waste, B., 332. Souring as a laundry operation, B., 658. and Kimball, C. S., briquetting coal with sodium silicate, B., 860.

See also Smith, Harry Edward.

Snell, J. M. See Sallans, H. R.

Snell, M. G., effect of plane of nutrition of ewes on their wool, lamb, and milk production, B., 83. Blackstrap molasses and maize-soya-bean silage for fattening steers, B., 83. Machine-dried soya-bean hay for fattening cattle, B., 284.

Snelling, R. W. Sce Thews, E. R. Snellman, K. O. Sce Björnstähl, Y.

Snethlage, H. C. S., system water-sulphur trioxide, A., I, 296, 517. Influence of solvent and temperature on speed of oxidation of organic substances by chromic acid. I., A., I, 570.

Snider, G. C. See Hoagland, R. Snider, H. J. See De Turk, E. E., and

Gieseking, J. E.

Snider, R. H., phospholipin fatty acids of muscle, A., III, 56.

See also Bloor, W. R.

Snider, S. R., and Coleman, D. A., soluble starch: its properties, with recommended supplementary procedure for determining suitability for use in the Lintner determination, B., 381.

Snipes, B. T., Hutchins, R. E., and Adams, J. A., effectiveness of sodium fluoride, arsenic trioxide, and thiodiphenylamine as food poisons for the firebrat (Thermobia domestica, Packard), B., 711.

Snoddy, A. O., Martin, W. S., and Procter & Gamble Co., wetting and foaming agents, (P.), B., 1020.

Snoddy, L. B., and Beams, J. W., measuring rotational speeds, A., I, 268.

See also Beams, J. W.

Snoek, J.L., and Louwerse, M.W., magnetic powder experiments on rolled nickel iron. II., A., I, 290.

Snoke, H. R., and Gallup, B. E., accelerated weathering tests of mineral-surfaced asphalt[-impregnated] shingles, B., 1056. Snook, L.C. See Underwood, E.J.

Snow, A. G., jun., transpiration [of plants] as modified by potassium, A., III, 106. Snow, M., and Snow, R., auxin and leaf

formation, A., III, 502. Snow, R., two now chemical plant growth substances, A., III, 160. Upward effects of auxin in coleoptiles and stems, A., III, 242.

See also Snow, M.

Snyder, C. C. See Johnson, E. R. Snyder, E. A. See Clark, Frank M. Snyder, E. B., factors affecting cooking

quality of the pea and Great Northern types of dry beans, B., 1265.

Snyder, F. D., apparatus for manufacture of prepared foeds, (P.), B., 839.

Snyder, G. A. C. See Hunter, W. C. Snyder, J. E., and Du Pont Cellophane Co., [gummed] label [for application to

hydrophobes], (P.), B., 772.

Finzel, T. G., and Du Pont Cellophane Co., adhesive [for cellulose derivatives],

(P.), B., 476.

Snyder, M.L., serologic agglutination of the obligate anaërobes, Clostridium para-putrificum (Bienstock) and C. capitovalis (Snyder and Hall), A., III, 275. Mechanism of non-specific serum agglutination of these anaërobes, A., III, 275.

Snyder, N. H. See Ellis, R. W. Snyder, R. K., and Gathercoal, E. N. determination of the alkalinity imparted to water by ampoule glass, B., 781.

Snyder, R. S. See Theophilus, D. R. Snyder, Inc., F. H., toning photographic prints, (P.), B., 1411.

Soare, A., and Pavlu, V., extraction of sulphur from metallic sulphides, A., I, 94.

See also Ionescu, T. Soares, M., specificity of structure of aspartase, A., III, 220.

See also Jacobsohn, K. P.Sobatzki, R. J. See Du Pont de Nemours

& Co., $E.\ I.$ Sobel, A. E., Pearl, A., Gerchick, E., and Kramer, B., micro-determination of strontium and calcium in mixtures containing both, A., I, 262.

Yuska, H., and Cohen, J., determination of small amounts of ammonia and other bases by the use of boric acid, A., III, 246.

Sobol, A. See Tiutiunnikov, B.

III, 70.

Sobolevskaja, O. J., and Butkevitsch, V. S., formation of citric acid in the makhorka leaf (Nicotiana rustica, L.), A., III, 329. Sobotka, H., and Antopol, W., inhibitors of

choline-esterase, A., III, 429. and Holzman, M., trehalose formation in cell-free alcoholic fermentation, A.,

Staff Large

Sobotka, H. See also Langmuir, I., Marx, W., and Soffer, L. J.

Sobue, H., and Nagano, M., viscose staple III. Formation of curliness fibre. (shrinkage by steeping, washing, and drying), B., 533.

Soceart, F. See Edwards, G. W.

Socher, H., and Oven, E. von, present position of colour kinematography, B.,

Società Anonima Prodotti Salpa & Affini S.A.P.S.A. See Internat. Latex Processes.

Soc. Anon. Vetreria Italiana Balzaretti Modigliani, felts of glass and similar materials, (P.), B., 674.

Soc. Italiana Pirelli, finely-divided substancos, (P.), B., 161. Zinc oxide, (P.), B., 342. Filters and purifiers employed for conditioning air, e.g., for respiration, by freeing it from poisonous gases and other injurious or undesired substances, (P.), B., 506. Filters for separating aërosols from air, (P.), B., 996.

See also Internat. Latex Processes. Société Anonyme des Aciéries du Nord & de l'Est, basic stcol, (P.), B., 1360.

Anon. pour tous Appareillages Soc. Mécaniques, apparatus for distribution of fluids, (P.), B., 402. Heating of oil or similar materials, (P.), B., 1167.

Anon. pour les Applications l'Electricité & des Gaz Rares, Établissements Claude-Paz & Silva, luminous electric-discharge tubes, (P.), B., 56. Luminous electric-discharge containers with fluorescence, (P.), B., 150. Electrodes for high-pressure, metallic vapour electric dischargo metallic vapour electric - discharge tubes, (P.), B., 362. Elimination of occluded gases from an enclosure [e.g., electron-discharge tube], (P.), B., 363. Sco also Claude, Andre.

Soc. Anon. des Brevets Fauth, blood meal from whale blood suitable for use as feeding-stuff for animals, (P.), B., 186.

Soc. Anon. Le Carbone. See Oppenheim, R. Soc. Anon. des Ciments de Thieu. See Blondiau, L.

Soc. Anon. Electro-Lux, water-softening apparatus, (P.), B., 512.

Soc. Anon. des Établissements A. Olier. Seo Olier, 1.

Soc. Anon. Krebs & Co., treatment of alkali-metal amalgam obtained in electrelytic cells having mercury cathodes, (P.), B., 359.

Soc. Anon. de Manufactures des Glaces & Produits Chimiques de St. Gobain, Chauny & Cirey, multi-cellular glass, (P.), B., 38. Refractory products, (P.), B., 673. Electric radiation furnaces, (P.), B., 1074. Tempered glass, (P.), B., 1342.

Soc. Anon. des Matières Colorantes & Produits Chimiques de St. Denis, and Clandin, $J_{\cdot \cdot}$, cyanio or thiocyanic anhydrides and condensation products

thereof, (P.), B., 419, and Lantz, R., azo-dyes [on the fibre], (P.), B., 232.

Soc. Carbochimique, Ferrero, P., Vandendries, C., and Berbé, F., glycols from oxides of olefine, (P.), B., 417.

Soc. d'Electro-Chimie, d'Electrométallurgie & des Aciéries Electriques d'Ugine, desulphurisation or simultaneous dephosphoration and desulphurisation of steel, (P.), B., 248. Dephosphorisation and desulphurisation of steel, (P.), B., 248. Soc. d'Electro-Chimie, d'Electrométallurgie & des Aciéries Electriques d'Ugine, deoxidation of ferrous metals with cyclic utilisation and regeneration of slags, (P.), B., 455. [Metal] articles resistant to gaseous corrosion, (P.), B.,

and Andrieux, J. L., alloys containing boron, (P.), B., 457.

See also Andrieux, J. L., and Brockbank, C.J.

Soc. des Établissements Barbet, apparatus for continuous distillation and rectification of musts containing acctone, ethyl alcohol, and butyl alcohol, (P.), B., 608.

Soc. d'Études & Applications Industriels, concentrated sweetened milk products and substances derived therefrom, (P.),

B., 285.

Soc. d'Études & de Travaux d'Imperméabilisation Procédés d'Étanchéité S.E.T.I., [underground] storage tanks for liquids, (P.), B., 858.

Soc. d'Exploitation des Cables Electriques Système, Berthoud, Borel & Co., and Borel, J., protection of [ferrous] metals against electrolytic corrosion, (P.), B.,

Soc. pour l'Exploitation des Procédés Abder-Halden, purification of gases from tar and recovery of the dehydrated tar, (P.), B., 14.

Soc. Française de Catalyse Généralisée, enclosures for chemical treatments in the gaseous phase by catalysts, (P.), B., 6.

Soc. Franc. Helita, luminous [plastic] substances, (P.), B., 812. Luminescent [urea-formaldehyde] bodies, (P.), B., 1241.

Soc. du Gaz de Paris, tar and similar hydrocarbon materials for road surfacing,

(P.), B., 411.

Soc. Générale Metallurgique de Hoboken Soc. Anon., separation and recovery of metals, (P.), B., 358. Recovery of tantalum and niobium, (P.), B., 1361.

Soc. Immobiliere 12 Industrielle Anversoise (S.I.M.I.N.A.), Soc. Anon. See Blumen-

Soc. Industrielle des Carburants & Solvents, deposition of catalyst metals on metallic supports for effecting catalytic hydrogenation, (P.), B., 543.

Soc. Industrielle des Dérivés du Soufre. See Boulogne, E.
Soc. "L'Huile des Records du Monde

S.A.F." See Dintilhac, J. G.

Soc. Lumière, calcivore lumière: a product preventing formation of calcareous precipitates in developers and of calcareous deposits on plates and papers, B., 731.

See also Raguin, G. A.

Soc. Minière & Métallurgique de Pennaroya, refining of lead and lead alloys, (P.), B., 932.

Soe. des. Prodnits Chimiques de Clamecy, and Établ. Lambiotte Frères, concentration of acetic acid, (P.), B., 118.

Soc. des Prod. Chim. de St. Bueil, titanium tetrachloride, (P.), B., 239.

Soc. de Prod. Chim. des Terres Rares, oxygen-containing compounds of cerium, (P.), B., 1337.

Soc. Rhodiaceta, dyeing of cellulose esters, (P.), B., 1041.

Soe. Solvay & Co., drying of gases by calcium chloride, B., 989.

Soc. Technique de Construction & de Raffinage. See Guichard, P.

Soc. des Usines Chimiques Rhône-Poulenc, soluble aromatic amido-compounds of therapeutic value, (P.), B., 620. [Sulphonamide] compounds of therapeutic value, (P.), B., 842.

Society of Chemical Industry in Basle, fast tints on cellulosic fibres, (P.), B., 31. [Azo-]dyes [for wool or acetate silk], (P.), B., 122. Azo-dyes, (P.), B., 221, 422. [Chromable] azo-dyes [for cotton and viscose silk], (P.), B., 222. Fast tints on vegetable fibres, (P.), B., 232, 1041. Softening of textiles, leather, paper, and similar fibrous materials, (P.), B., 233. Compounds containing the ætioeholane nucleus, (P.), B., 288. [Aminoaryl]sulphonic acids, (P.), B., 327. Diazonium salts, (P.), B., 328. Vat dyes and intermediates, (P.), B., 330, 887, 1031. Isomerisation of Δ^{5:6} dehydroandrosterone and compounds derived therefrom, (P.), B., 393. Amine oxides, (P.), B., 418. Aromatic sulphocarboxylic acid amides and imides, (P.), B., 421. Colouring of paper, (P.), B., 431. Coloured masses from cellulose derivatives, natural or artificial resins, or waxes, (P.), B., 469. Compounds of the ætio- and ætioallo-cholenone series, (P.), B., 498. Polynuclear cyclic hydroxy-ketones [of the sterol series] and esters thereof, (P.), B., 498. Esters of polynuclear cyclic B., 498. Esters of polynuclear cyclic hydroxy-ketones, (P.), B., 620. Ketones of pyrene series, (P.), B., 651. Acid amides substituted at the nitrogen atom, (P.), B., 652. Watersoluble heterocyclic mercury compounds, (P.), B., 730. Polynuclear unsaturated cyclic polyketones, (P.), B., 730. Esters of polynuclear cyclic B., 730. Esters of polynuclear cyclic oxyketones, (P.), B., 730. 2:4:6oxyketones, (P.), B Triamino-1:3:5-triazine [melamine], (P.), B., 762. Azo-dyes containing chromium, (P.), B., 763. Indigoid dyes, (P.), B., 763, 887. Improving textile materials, (P.), B., 775. Substituted pyridine-o-dicarboxylic amides, (P.), B., 842. Unsaturated ketones containing a sterol nucleus, (P.), B., 842. [Azo]-dyes and intermediate products therefor, (P.), B., 882. Azo-dyes [pigments and ice colours], (P.), B., 884. Metalliferous azo-dyes, (P.), B., 885. [Metalliferous pigment] dyes, (P.), B., 885. Polyazo-dyes [for coppering], (P.), B., 885. Dyes, (P.), B., 886. 1:4:5-Tribenzamido-8-hydroxyanthraquinone [vat dye], (P.), B., 886. Anthraquinone derivatives, (P.), B., 887. Indigoid vat dyes, (P.), B., 888. [Non-resinous] aldehyde condensation products, (P.), B., 1024. [Hydr]oxybenzofluorenones, (P.), B., 1025. Dyes of the anthraquinone series, (P.), B., 1028. Insoluble azodyes on the fibre, (P.), B., 1041. [Resinous] aldehyde condensation products (P.) B. 1080 ducts, (P.), B., 1089. Diazonium salts, (P.), B., 1175. Emulsions, (P.), B., 1175. [Hydr]oxy-sulphonic acids of hydrocarbons of high mol. wt., (P.), B., 1176. NN'-Disubstituted dipyrazoleanthronyls [dyes, etc.], (P.), B., 1180. Polyazo-dyes, (P.), B., 1181. [Azo-] dyes containing metal in complex union, (P.), B., 1182. [Vat] dyes [of the anthraquinone series] and intermediate products, (P.), B., 1182. Vat dyes, (P.), B., 1184.

Society of Chemical Industry in Basle, dyeing of animal fibres, (P.), B., 1197. Fast shades [with azo-dyes], (P.), B., 1197. Azo-dyes [for wool or acetate silk], (P.), B., 1316. Coloured condensation products, (P.), B., 1318. Dyeing or colouring materials, (P.), B., 1329. Improvement of effects mechanically produced on textile materials containing cellulose, (P.), B., 1331. Lacquers, (P.), B., 1376. Durable ferrous compounds, (P.), B., 1408. Separation of stereoisomeric alcohols of the androstane series, (P.), B., 1408.

and Bonhôte, G., azo-dyes [pigments and ice colours], (P.), B., 1317.

Soc. of Glass Technology, Glass Standards Committee, proposed standard thermalendurance test based on the use of glass rods, B., 137.

Society of Public Analysts Sub-Committee, dirt in milk, B., 610.

Socony-Vacuum Co., Inc. See Traver, A. E. Socony-Vacuum Corporation. See Prutzman, P. W.

Soeony-Vacuum Oil Co., Inc. See Berger, H. G., Berry, T. M., Burkhard, M. J., Curtis, H. A., Davis, H. S., Francis, A. W., Moran, R. C., Rather, J. B., Reiff, O. M., and Story, B. W.

Soda, T., and Koyama, S., glucosulphatase. XIII. Contents of glucosulphatase and phosphatase in various invertebrates,

A., III, 394.

and Nagai, W., sulphuric esters of sugars. I. Rough estimate of proportion of glucose polysulphates in their mixture, Ă., II, 178.

and Tanabe, U., potentiometric titration of proteins and amino-acids, A., II, 130.

Soday, F. J. See Thomas, C. A. Soderberg, F. A. See Chalon, O. T.

Soderberg, G., cyanide cadmium-plating solution, B., 453.

Soderberg, K. G. See Dubpernell, G.

Söding, H., is the [plant] growth-substance species-specific? A., III, 49.

See also Veh, R. von. Söhnchen, E. See Piwowarsky, E.

Söhngen, A. M., Dutch malting barleys, B.,

Söhngen, N. L., Wieringa, K. T., and Pasyeer, A., curdling of milk: the

curdling enzyme, B., 611.
Sölling, P., complement content of sera of the new-born, infants, and fœtus, A., III, 453.

Söllner, K. See Daniel, F. K. Sonke, H. See Meerwein, H.

Sörensen, M. K., air-dried granulated peat for manufacture of briquettes, (P.), B.,

Sörensen, N. A. See Riiber, C. N. Soff, K. See Freudenberg, K.

Soffer, L. J., blood-electrolytes in experimental liver injury by arsphenamine in dogs, A., III, 89.

Dantes, D. A., and Sobotka, H., electrolytes of blood and urine of dogs with acute hepatic injury produced by arsphenamine, A., III; 424.

Sok, G. See Müller, Eugen.

Sokkola, L., determination of sulphur dioxide and sulphur trioxide in sulphur burner gases, B., 778.
Sokolik, A., and Voinov, A., knocking in

internal combustion motors, and the detonation wave, B., 752. See also Rivin, M., and Skalov, B.

Sokolov, A., neutrino theory of light, A., I, 441.

See also Ivanenko, D.

Sokolov, A. V., reducing the harmful effect of excess of chlorides and ammonium chloride in Potazot, B., 71. Importance of soil type and mechanical composition for sensitivity of plants to chlorine, B., 821. Sokolov, G. See Drinberg, A., and Sheb-

rovski, V.

Sokolov, I. I., decomposition of cellulose xanthate by water in the preparation of transparent foils, B., 1035. See also Belenki, L. I.

Sokolov, J.G. See Baschmatschnikov, I.E.Sokolov, M. M. See Nikiforov, V. K.,

and Stefkin, F. S. Sokolov, P. I. [with Lovisson, Z. F.], concentration polarisation in electrolysis

of water, A., I, 140. and Sosinski, S., movement of liquids in an electric field, A., I, 22. Flow of liquids in an electric field. II. Influence of electric field on the viscosity of liquids, A., I, 125.

Sokolov, S. I., solubility isotherms of disubstituted phosphates of potassium and ammonium at 0°; the system $K_2HPO_4-(NH_4)_2HPO_4-H_2O$, A., İ, 618.

See also Dulitzkaja, R. A.

Sokolov, V. I., increasing productivity of [sodium ferrite] drum in Loewig's process for production of sodium hydroxide, B., 901.

and Bartoschevitseh, J. V., rapid determination of sesquioxides in caustic

soda, B., 435.

and Sitnik, E. P., determination of carbonate in bicarbonate, B., 435.

Sokolova, E. A., and Litvinova, L. M., kinetics of thermal decomposition of sodium hydrogen sulphide in aqueous solutions, A., I, 467.
Sokolova, J. K. See Bolotov, B. A.

Sokolova, M., and Korpus, Z., determining hull content of castor-bean meal, B., 389. See also Shan-Puschkin, M.

Sokolova, P. See Vorontzov, I. Sokolovski, B. A., superphosphate, B., 132. Sokov, P. See Gimmelman, G.

Solacolu, S., attempt at rational classification and nomenclature for Portland cements, B., 442. Determination time of setting [of cement], B., 674. Solacoln, T., and Constantinesco, D., action

of β -indolylacetic acid on germination and development of seeds, A., III, 160. Tumours of a neoplasmic character formed on plants by the action of β -indolylacetic acid, A., III, 189.

Solana, L. See Geffcken, W. Solandt, D. Y., effect of potassium on excitability and resting metabolism of frog's muscle, A., III, 133. Solanki, D. N. See Joshi, S. S.

Solar Manufacturing Co. See Hetenyi, P. Solarino, G., effect of oryzotoxin on growth of pigeons, A., III, 153. Oryzotoxin and experimental beri-beri in pigeons, A., III, 188.

Solaroli, I., blood-catalase during experimental hyperthermia and fever in man,

A., III, 379.

Soldatov, B. J. See Lopatin, L. V. Soleillet, P., average life of the zinc atom in the 2^3P_1 state, and method of total absorption, A., I, 157. Passage of the Zeeman effect into the Paschen-Back effect of hyperfine structure in the polarisation of resonance radiations, A., I, 208.

Soler, G., performance of refractories used in basic alloy-steel production, B., 671. See also Callinan, E. E., and Hare, W. A. Soletschnik, N. J. See Federov, D. A. Soley, M. H. See Lagen, J. B.

Solf, K. See Manegold, E.

Solius, N., and Laudenbak, N., mechanical strength of paper in relation to composition, quality, and degree of beating of pulp, B., 27.

Soljanikova-Nikolskaja, V., iodometric determination of vitamin-A, A., III, 231, 324.

Scilazzo, G., plant growth-stimulating factors, A., 111, 409.

Soller, A. See Sprague, P. T.

Soller, T., Bitter's strim under elastic distortion, B., 1218.

Sollers, (Miss) E. F., and Crenshaw, J. L., dissociation pressures of potassium deuteride and potassium hydride, A., I, 617.

Sollmann, T., and Schreiber, N. E., comparative diuretic response clinical injections of various mercurials, A., III, 95.

Schreiber, N. E., and Cole, H. N.excretion of mercury after clinical intramuscular and intravenous injections, A., III, 177. Mercury in-unctions, A., III, 214.

Schreiber, N. E., Cole, H. N., DeWolf, H. and Ambler, J. V., excretion of mercury after oral administration of mercury with chalk, yellow mcrcurous iodide, and corrosive sublimate, A., III, 177.

Solmssen, U. See Karrer, P. Solntzev, A. I., determination of total nitrogen, "crude" fat, and "crude" cellulose, B., 724.

Solodki, F., needles of coniferous treesa raw product for new wood-chemistry processes, B., 894.

Sologub, $I.\ V.$ See Malenok, $N.\ M.$ Solomon, $A.\ K.$ See Kistiakowsky, $G.\ B.$ Solomon, E., fuel oil and motor spirit, (P.), B., 412. Motor fuels, (P.), B., 412, 520. Solomon, F., and Brier, B., transfer ink,

(P.), B., 159.

Solomon, H. See Karrer, P. Solomon, J., diffusion of light by neutrons, A., I, 6. Disintegrations produced by cosmic rays, A., I, 277. Recent progress in the neutrino theory. I., A., I, 390. Origin of quadrupolar moments of atomic nuclei, A., I, 441.

Solomon, S. See Dastur, R. H.
Solomon, W. See Henry, T. A.
Solotareva, A. M. See Alexandrov, A. P. Soloviev, A. V., electrochemical investigation of anti-corrosive properties of sodium nitrite, A., I, 245.

Soloviev, E. I., influence of ionic flow on stability and coagulation of colloidal systems, A., I, 182.

Soloviev, G. P., purification of brine used in ammonia-soda process, on a semi-industrial scale, B., 901.

Solovin, I. E., determination of free fat in soap, B., 1078.

Solovjeva, L. R., mechanism of chemical action of supersonics, A., I, 319.

Soltan, D. L., and Longhridge, D. H., determination of variation of carbon content in mild steel by magnetic analysis,

Soltys, A., preparative handling of small amounts of material, A., I, 268. See also Lieb, H.

Solvay Process Co. See Hayes, J. W., Keene, P.A., and Sundstrom, C

Somazawa, K. See Matsumoto, T. Somekawa, E. See Ichiba, A. Someno, F. See Kato, S.

Somer, A. J., and Harding, K., anhydrous boric acid, (P.), B., 437.
Somers, F. P. See Aluminium, Ltd

Somerville, I. C. See Turley, H. G.

Somerville, J. C. See Percival, E. G. V. Somerville, J. M. See Bailey, J. E. Somes, H. E., treatment [pickling, etc.],

of metals or metallic articles, (P.), B.,

Sommelet, M., intramolecular rearrangement, A., II, 410.

Sommer, A., and T.R.C. Corp., apparatus for producing pulverulent hydraulic binders with bituminous constituents, (P.), B., 1346.

Sommer, A. L., reduction of nitrates to nitrites by expressed juice of higher green plants, A., III, 48. Nitrite and formaldehyde formation in certain algæ, A., III, 238.

Sommer, F. See Marder, M.
Sommer, H., recent testing processes for spinning materials [cotton, etc.], B., 1319. Sommer, Hermann, purification of Botulinus

toxin, A., III, 182. Sommer, H. H. See Stebnitz, V. C., and

Templeton, H. L.
Sommer, J. V. See Standard Oil Development Co.

Sommer, P., light-metal alloys for parts of internal-combustion engines exposed to heat, B., 1222.

Sommerfeld, A., specific heats of metal

electrons, A., I, 71. Shape of the Compton lines. I., A., I, 436.

Sommerman, G. M. L., properties of saturants for paper-insulated cables, B., 1229.

Sommermeyer, K., heat production in positive column of discharges in monatomic gases, A., I, 105. Somogyi, J., influence of small dosages of

copper in blood formation, A., III, 63. Somôgyi, M., reagent for copper-iodometric determination of very small amounts of sugar, A., II, 136. Detection and determination of small amounts of glucose in mixtures containing maltose, Ă., II, 399.

See also Gray, S. H., Heinbecker, P., and Weichselbaum, T. E.

Soncini, C. See Guerini, B.

Sonder, K., aqueous emulsions of resin and paraffin wax, (P.), B., 1242.

Sonderhoff, R., and Thomas, Heinz, enzymic dehydrogenation of trideuteroacotio acid, A., II, 365.

See also Fromherz, H., and Wieland, H. Sonn, A., imidazole-dihydrides-(4:5)-[4:5dihydroglyoxalines; pharmaceuticals], (P.), B., 422.

Sonneborn Sons, Inc., L. See Liberthson, L. Sonntag, F., and Kuhlmann, G., homeopathic preparations; Helleborus orientalis, B., 1132.

Sonsthagen, A., device for compressing materials into a more or less viscid condition, (P.), B., 992. Roller mills for grinding materials, (P.), B., 992.

Soos, S., nutrition of natural wine yeasts,

B., 967.

Sopwith, D. G., and Gough, H. J., effect of protective coatings on corrosionfatigue resistance of steel, B., 792. See also Cox, H. L., and Gough, H. J.

Sorce, S. Seo Fiandaca, S. Sordelli, S., artificial fibrous products, (P.),

B., 429,

Soreni, E. T., and Tschepinoga, O. P., respiration and system of respiratory enzymos of fatigued muscle, A., III, 126. Sorensen, C. M. See Roland, C. T.

Soresina, C. See Bassi, U.

Sorgato, I., equilibria in the diffusion process of sugar beet, B., 960.

Sorgès, F., petitgrain oil of Sicilian mandarins, B., 187.
Sorkin, M. See Staudinger, H.

Sorm, F., and Drápalová, Z., trinitrophloroglucinol, A., II, 495.

Sornet, F., Kopka, A., and Chocolat-Magniez-Baussart, earamel, (P.), B., 85.

Sorrentino, E_{\cdot} , and Intenti, R_{\cdot} , corresion of lead pipe and a new alloy for water conduction, B., 246.

Sosa-Bourdouil, C., comparative elementary composition of floral structures, A., III, 287.

Sosedko, A. F., geochemical diagram of the pegmatites of the principal arcs of mountain chains of Central Asia, A., I, 270.

See also Borovik, S. A.

Sosedov, N. J., and Drozdova, Z. B., power of different varieties of wheat to form sugar, A., III, 159.

Sosi, J. See Remesov, I. Sosinski, S. See Sokolov, P. I.

Soskin, S., Essex, H. E., Herrick, J. F., and Mann, F. C., comparative effect of adrenaline and of glucose on utilisation of sugar by muscles, determined with aid of thermostromuhr measurements of blood flow, A., III, 399.

See also Freed, S. C. Sosnowski, S., further dohydration and purification of low-b.p. fractions obtained in azeotropic dehydration of crude alcohol, B., 522.

and Treszczanowicz, E., rôle of bonzino as an azeotropic agent in the dehydration of alcohol, B., 522.

Sosson, C. E. See Imperial Chem. Industries.

See Ochiai, E.

Sotola, J., composition and nutritive value of certain cereal hays as affected by plant maturity, B., 977.
Sottysiak, J. See Schmidt, F. C.

Soubarew-Châtelain, (Mmc.) Z., variations in conductivity of dilute solutions of molybdic acid during neutralisation, A., I, 519.

Souček, R. See Glazunov, A. Souci, S. W., and Schmitt, F., humio acids; composition and properties of humic acids prepared by extraction with neutral aqueous solutions of hoxamethylenetetramine, B., 199.

Souden, A. G. See Schumacher, E. E. Souders, M., jun., viscosity-temperature relations, A., I, 453.
Soukal, V. See Dubský, J. V.
Soula, L. See Baisset, A.

Soulary, P., and Comp. Mines de Bruay, apparatus for pneumatic separation of materials of different sizes and density, (P.), B., 303.

Soule, E. C., and Mathieson Alkali Works, hydrogen peroxide, (P.), B., 544. Soundararajan, R. See Dutta, M. C

South Bank Chemical Co., Ltd., and Caddick, A. J., [coloured] deodorant blocks for disinfecting water-closets, basins, etc., (P.), B., 398.

South Metropolitan Gas Co., colorimetric determination of carbon disulphide in gas or motor fuels, B., 1002. Preparation of thin tar carpets, B., 1209.

Chandler, D., and Skinner, A. J., boiling pans and like heaters, (P.), B., 99. Muffle furnaces, (P.), B., 197.

South Metropolitan Gas Co., Chemical Department, determination of recoverable sulphur in gas liquor, B., 515. Preparation of non-toxic tar, B., 865.

Southard, J. C., and Nelson, R. A., vapour pressure of phosphorus pentoxide, A., Î. 354.

See also Royster, P. H.

Souther, B. L., Butler, C. L., Cretcher, L. H., and Mellon Inst. of Industrial Res., purification of apocupreine, (P.), B., 394.

See also Butler, C. L.

Southern Acid & Sulphur Co. See Pough, F. H.

Southern Cotton Oil Co. See Royce, H. D. Southwell, R. V. See Warlow-Davies, E.J. Southwell-Sander, G. See Jennings, G. H. Southworth, H., acidosis associated with administration of p-aminobenzenesulphonamide "prontylin," A., III, 264.
Southworth, J., preserving developers with acid, B., 844. Photographic omulsion

speed and contrast, B., 1274.

Souza, D. A., preparation of tobacco oxtracts of high nicotine content, B., 497.

Sowa, F. J., and Nieuwland, J. A., organic reactions of boron fluoride. XIV. Reaction of amides with acids and amines, A., II, 371.

See also Du Pont de Nemours & Co., E. I., Kranzfelder, A. L., Kroeger, J. W., McKenna, J. F., Sartoretto, P. A., Toole, S. G., and Wunderly, H. L.

Sowden, J. C. See Hurd, C. D.

Sowers, B. L. Sco Mangelsdorf, T. A. Sowter, P. F. G. See Brit. Celanese.

Spacu, G., and Macarovici, C. G., constitu-tion of double salts. XX. Diammines with benzidine and tolidine, A., II, 335. and Popper, E., refractometric detec-

tion in a mixed aqueous solution of magnesium and calcium chlorides of a compound of higher order, not identical with tachydrite, A., I, 232. Constitution of potassium cyanide and selenocyanate, A., I, 601. and Voichescu, P., ammoniates of

ammonium chloride, bromide, and iodide (tensimetric studies), A., I, 474.

Spacu, P., Raman spectra of linear triatomic molecules of the type XYZ; vibration spectrum and constitution of tho selenocyanide ion, A., I, 10. Ammoniates of uranyl and uranous chlorides, A., I, 82. Aquotisation and hydrolysis of [cobalt] chloro- and aquopentammine chlorides, A., I, 147. Raman spectra of stereoisomeric complexes of platinum and cobalt, A., I, 168. Substitution of water by ammonia and pyridine in complexes, A., I, 172. Action of ammonia on tantalum pentachloride, A., I, 373. Sco also Hieber, W.

Spanig, H. See Braun, J. von.

Späth, E., natural coumarins and their action on fish, A., II, 29. Natural coumarins, A., II, 299.

Bose, P. K., Gruber, W., and Guha, N. C., natural coumarins. XXVIII. Marmelosin, A., II, 299.

Späth, E., Bose, P. K., and Schläger, J., natural coumarins. XXVI. Constitution and synthesis of ayapin, A., II,

and Bruck, J., natural coumarins. XXIX. Constitution of osthenol, A.,

II, 299.

and Galinovsky, F., catalytic dehydrogenation processes. X. Dehydro-genation of dihydrocoumarins, A., II,

and Gruber, W., isomerism of nor-coralydine, A., II, 394.

and Jerzmanowska-Sienkiewiczowa, Z., natural coumarins. XXV. Fraxinol, a new component of ash bark. XXVII. Fraxidin and isofraxidin. XXXII. Partial synthesis of fraxidin and isofraxidin and synthesis of a further derivative of 6:7:8-trihydroxycoumarin, A., II, 254, 299, 428.

and Kesztler, F., tobacco bases. IX. Syntheses of l- and d-nornicotine. X. Syntheses of l-anabasine and danabasino. XI. l-Anatabine, a new tobacco alkaloid. XII. Occurrence of dl-nornicotine, dl-anatabine, and lanabasino in tobacco, A., II, 80, 125, 171, 265. Natural coumarins. XXXI. and XXXIII. Constitution of ammoresinol, A., II, 348, 428. and Kubiczek, G., natural coumarins.

XXX. Synthesis of bergaptol and of

isobergapten, A., II, 348.

Kuffner, \hat{F} , and Kesztler, F, synthesis of 1 - benzyltetrahydroisoquinoline bases, A., II, 306.

and Lintner, Josef, formation of lactams from lactones, A., II, 53.

Okahara, K., and Kuffner, F., identity of ficusin with psoralene, A., II, 112. Orekhov, A. P., and Kuffner, F., ident-

ity of ungernine with tazettine, A., II, 39.

Schlemmer, F., Schenck, G., and Gempp, A., new nitrogenous component of Sanguinaria canadensis, L., A., II,

and Vierhapper, F., natural coumarins. XXIII. Xanthotoxol, a new natural substance from Angelica seeds and the

total synthesis of xanthotoxol and imperatorin, A., II, 163.

Wessely, F., and Kubiczek, G., natural coumarins. XXII. Synthesis of allobergapten. XXIV. Synthesis of bergapten, A., II, 163, 206.

and Zajic, E., tobacco bases. VIII. New tobacco alkaloids; rheadine, l-peganine, and ammoresinol, A., II,

Spath, W., driving mechanism of machines for fatigue testing in the oscillation range of the specimen, B., 508. Upper and lower yield points, B., 928.

Spahr, W., extractives of embryos of the shark, Acanthias vulgaris, A., III, 167. Spalding, C. G., and Gould, G. R., laxative

composition, (P.), B., 1136. [Laxative] pectin composition, (P.), B., 1404.

Spanedda, A., polysaccharide of the typhus bacillus. IV. Action of antipolysaccharide sera on the polysaccharide. V. Action of antipolysaccharide sera on the bacilli and their lysates. VI. Toxic action, A., III, 167, 398.

Spanel, A. N., deposited rubber articles [from latex by dipping], (P.), B., 816. Spangler, P. E., spinal anæsthesia in gen-

eral: nupercaine, A., III, 25.

Spangler, S. F., modified acid-recovery process for treating troublesome acid [petroleum-refinery] sludges, B., 1004.

Spanhoff, R. W. See De Fremery, P., and Reichstein, T.

Spanier, P., thermostable bacteriolysins and the lysozyme question, A., III, 489.

and Deribas, D., nucleolytic nature of lysozyme, A., III, 489.

Sparkes, F. N., control of moisture content of aggregates for concrete, introducing a new vibration method, B.,

Sparks, C. E., and Nelson, R. E., acyl derivatives of o-aminophenol, A., II,

Sparks, J. W. See Standard Oil Co.

Sparks, W. J., Peppel, W. J., and Marvel, C. S., rearrangements of polyacetylenes. X. Rearrangement product of hexatert.-butylacetylenylethane, A., II,

See also Du Pont de Nemours & Co., E. I.

Spasski, N., volumetric determination of unsaponified fat in soap, B., 696. Determination of fatty acids in [clay-] filled soaps, B., 696.

Spassov, A., preparation of esters from alcohols and acid chlorides in the presence of magnesium; esterification of tertiary alcohols, A., II, 439. Reaction between esters of organic acids and magnesium isopropyl chloride. Experiments with ethyl β-phonylpropionate and ethyl succinate, A., II, 482.

Spaulding, C. H., conditioning of precipitates and separating them from liquids [water softening], (P.), B., 99.

Spausta, F., vacuum distillation of motor [lubricating] oil, B., 518. Refining with selective solvents, B., 1299.

Speakman, J. B., reactivity of sulphur linkage in animal fibres. III. Permanent set at low temperatures, B., 24. Treatment [permanent waving] of fibres or fibrous materials containing keratin, (P.), B., 27. Oiling of wool in the worsted spinning process, B., . 533.

and Stoves, J. L., reactivity of sulphur linkage in animal fibres. IV. Formation of CH:N linkages in setting processes, B., 890.

and Townend, F., constitution of the keratin molecule, A., III, 199.
See also Liu, W. T., and McMahon,

P. R.

Speakman, J. C., effects of sodium chloride and aniline hydrochloride on surface tensions and partial vapour pressures of aqueous aniline solutions, A., I, 76.

Specchia, O., and Dascola, G., diamagnetism of heavy water, A., I, 605. Specht, F., analysis of fluorides, A., I,

Specht, H., drainage through Fourdrinier

[paper-machine] wires, B., 768.

Specht, M., conservation of roasted coffee, (P.), B., 85.

Specht, P. See Vorländer, D.

Specht, W., chemiluminescence of hæmin and recognition of forensically important blood traces, A., III, 111. Sulphurous acid and formaldehyde in corpses, A., III, 307.

Specialty Sales Corporation, Ltd. See Bavin, G. D., and Powell, M.

Spedding, F. H., relationships between absorption spectra of rare-earth salts and crystal structure, A., I, 165. Crystalline fields present in Er₂(SO₄)₃,8H₂O, A., I, 349. Sharp absorption lines for use as a comparison spectra in stellar photography, A., I, 493. and Hamlin, H. F., energy states in

solids with particular reference to NdCl₃,6H₂O, A., I, 392.

Hamlin, H. F., and Nutting, G. C.,

energy states of solids with particular reference to the energy states of Nd₂(SO₄)₃,8H₂O, A., I, 216.

Howe, J. P., and Keller, W. H., energy states of crystalline Pr₂(SO₁)₃,8H₂O, A., I, 393.

See also Bethe, H. A., and Nutting, G. C. Speed Surfacers, Ltd., [surface-]grinding machines for hard materials, (P.), B.,

Speer, J. H., and Hill, A. J., nuclear alkyl derivatives of β -phenylethylamine, A.,

Spees, A. H. See Zahn, C. T.

Speh, K. C., y-rays of lithium and fluorine under a-particle bombardment, A., I, 5. Speidel, H. See Schmid, G.

Speight, G. E. See Stevenson, W. W. Speight, J., dust filters, (P.), B., 996.

Speirs, $M_{\cdot \cdot}$, and Sherman, $H_{\cdot \cdot}$ $C_{\cdot \cdot}$, calcium and phosphorus retention in growth, in relation to form of carbohydrate in food, A., III, 20.

Speirs, W. E., acid-resisting industrial filters. I. Perforated stoneware filters,

Speitmann, M., determination of polymeric and homologous condition of synthetic resins by means of the "plastograph' in relation to the technique of moulding, B., 698.

Spektor, A. G., influence of dimensions of surface defects on sensitivity of magnetic powder methods, B., 680.

[organic] chemical reactions, (P.), B.,

Spellmeyer, E. F., ageing of alcoholic beverages, (P.), B., 178. Accelerating

Spence, A. W. See Scowen, E. F.

Spence, D., and Ferry, J. D., vulcanisation of rubber latex by potassium ferricyanide, B., 1090. Enhanced polymerisation and depolymerisation of natural rubber by quinones and related compounds, B., 1377.

Spence, R., and Wild, W., photo-decomposition of gaseous acetone, A., I, 255.

See also Davies, W.

Spence, W. L., separating and delivering devices for fluent materials, (P.), B.,

Spence & Sons, Ltd., P. See Hancock, A. Spencer, A. G., corrosion of nickel anodes, B., 452.

Spencer, D. A., causes of [photographic] graininess, B., 500. See also Bell, D. S., Harrison, G. B.,

Murray, H. D., and Ward, Justus C.

Spencer, E., and Mitchell, F. S., [pulp] digesters and valves therefor, (P.), B., 334. Perforated inner bottom plates of digesters, (P.), B., 334.

Spencer, Edmondson, potash-soda-felspars.
I. Thermal stability, A., I, 269. Spencer, E. L., frenching of tobacco and

thallium toxicity, A., III, 286. Spencer, E. Y. See Walker, O. J. Spencer, G. D. See Lucas, Ltd., J. Spencer, H. C., Morgulis, S., and Wilder, V. M., micro-determination of gelatin and collagen content of muscles from normal and dystrophic rabbits, A., III, 375.

See also Morgulis, S.

Spencer, H. F. See Morton, W. A. Spencer, J. F., and Trew, (Miss) V. C. G., diamagnetism of mixtures of organic liquids, A., I, 72.

Spencer, L. J., tektite problem, A., I, 269. Tenham (Queensland) meteoritic shower of 1879, A., I, 269. Mineral names, A., I, 430, 585.

Spencer, P. L., and Raytheon Production Corp., thermionic gaseous discharge rectifier, (P.), B., 1076.

Spencer, R. C., effect of the spectrometer on width of spectral lines, A., I, 158. Sources of asymmetry in X-ray diffrac-tion grating and refraction measurements, A., I., 158. Diffraction pattern due to an absorbing prism, A., I, 590. Spencer, R. R., effect of radium on bacteria,

A., III, 228.

Spencer, S. B. See Imperial Chem. Indus-

Spencer, W. D., low-temperature tar acids as raw material for the plastics industry,

Spencer, W. M., elastic threads [from rubber latex], (P.), B., 816.Spencer-Strong, G. H., and Theodore, J. J.,

delayed ground-coat blistering, B., 37.

Spengler, O., physico-chemical phenomena in sugar extraction, B., 959.

and Böttger, S., barium chloride method for determining end-point of second saturation [of sugar-beet juices], B.,

Böttger, S., and Dörfeldt, W., invert sugar content of raw [beet-sugar] juice and its influence on quality of the purified juice, B., 379. Determination of the optimum point in cold pre-defecation [of sugar juice], B., 1110. Simplification of working in first and second carbonatations [in beet-sugar factories], B., 1110. Influence of oxygen and oxidising agents on [beet-]sugar factory juices, B., 1110. Collactivit process in sugar manufacture, B., 1112.

Böttger, S., and Höfer, A., measurements of pH and poH in [beet-]sugar factory juices at high temperatures.

I., B., 1110.

Böttger, S., and Schmidt, K., attainment of regular working in the second carbonatation [of beet-sugar juices],

B., 1110. and Dorfmüller, G., action of carbon dioxide on sugar solutions containing

lime. IV., B., 1110. and Horn, E., viscous character of [sugar] massecuites, B., 483. Suitability of indigenous [German] filter cloths for filtration of first-carbon-

atation [beet-sugar] juices, B., 960. Tödt, F., and Böttger, S., use of indicator papers in beet-sugar manufacture, B., 482. Buffering capacity of various

[beet] sugar-factory products, B., 482. "Teatini" process, B., 827. and Zablinsky, K., determination of ash content of raw [beet] sugar; comparison of sulphate and electrometric methods, B., 175. Valuation of direct-consumption sugars, B., 1113.

Spengler, O., Zablinsky, K., and Wolf, A., values of the Clerget devisor [for sucrose inversion] under different conditions. B., 174.

Sperber, E. See Runnström, J.

Sperling, V. See Lukes, R.
Speroni, A. See Royer, M.
Sperry, J. B., and Amer. Well Works, activated-sludge system of sewage treat-

ment, (P.), B., 850.

Sperry, W. A., rate of operation of heated [sludge-]digestion tanks, B., 1413.

Sperry, W. M., effect of glucose ingestion on

cholesterol fractions of blood, A., III, 3. Concentration of total cholesterol in serum, A., III, 84. Determination of cholesterol, A., III, 195. and Bergmann, W., absorbability of

sterols with particular reference to ostreasterol, A., III, 305. and Stoyanoff, V. A., influence of sodium

glycocholate on enzymic synthesis and hydrolysis of cholesteryl esters in blood-serum, A., III, 112.

Sperti, G. S., Loofbourow, J. R., and Dwyer, C. M., proliferation-promoting substances from cells injured by ultraviolet radiation, A., III, 473. See also Rider, T. H.

Speyer, E. R., leaf-miner of tomato plants, B., 1105. Thrips injurious to carn-

ation plants, B., 1106.
Spicer, D. W., and Burgwald, L. H., use of $p_{\rm H}$ of young cheese in predicting acid development in Cheddar cheese during storage, B., 491. Spiegel, E. See Klein, Otto.

Spiegel, G., and Ulich, H., e.m.f. of cells with non-aqueous solvents. II. Lithium amalgam electrodes in non-aqueous solvents, A., I, 188.

Spiegel, M. See Morgan, P. F.

Spiegel-Adolf, M., polarisation studies in collodion membranes and in synthetic protein-lipoid membranes, A., I, 359. Physical chemistry of lipins. IV. Influence of narcotics on the salt-binding capacity of lecithin, A., III, 119. Melanins. I. Photosynthetic melanins, A., III, 374.

Spiegelberg, C.H., acid and p_H variations in Ananas comosus, Merr., in relation to swells caused by Clostridium sp., B., 1126.

Spiegl, A. See Enders, C.

Spieker, E., butter, (P.), B., 84.

Spielberger, G., thioplasts, their production and use, B., 1237.

Spielhagen, G. F. See Fowler, W. M.
Spielman, L. A., Joyner, N. T., Lappen,
J. J., and Stillman, R. C., report of
A.O.C.S. Committee on determination of soap in refined oil, B., 941.

Spielman, M. A., and Schmidt, M. T., magnesium mesityl bromide as reagent in the acctoacetic ester condensation, A.,

11, 482.

Spielvogel, W. See Schneekloth, W.

Spiers, C. H., chemical engineering in leather industry, B., 68.

Spiers, C. W. F., origin of optical activity in nature, A., I, 445.

and Wibaut, J. P., ultra-violet absorption spectra of pyridine and pyridine derivatives, A., I, 343.

Spiers, H. M. See Thermal Industrial & Chem. (T.I.C.) Res. Co.

Spiers, W., cupola practice, B., 929. Spies, J. R., solubility of nicotine silicotungstate in solutions of dilute hydrochloric acid, A., I, 128.

Spies, J. R., croton resin. IV. Acids insoluble in light petroleum, A., III, 446. Determination of small quantities of nicotine by a silicotungstic acid micro-method, B., 392. and Harris, T. H., determination of

nitrogen in refractory organic substances by a modified Dumas micromethod, A., II, 358.

Spiess, $C.\ F.$ See Stackelberg, $M.\ von.$ Spikes, W. F. See Benedetti-Pichler,

Spillane, J., tryptophan reaction in the cerebrospinal fluid, A., III, 201.

Spindel, M., shrinkage of cement and concrete, B., 1055.

Spinks, J. W. T., and Taube, H., photodecomposition of chlorine dioxide in carbon tetrachloride solution, A., I,

See also Brown, A. G., and Herzberg, G. Spinoglio, P., structure of dihalogenodialkyl sulphides and selenides, and of their complexes with auric chloride and platinic bromide, A., II, 365. Structure and electronic interpretation of some optically active sulphoxides, A., II, 373. Polar and non-polar form of o-, m-, and p-aminobenzoic acids, A., II,

Spiridonova, S. I., determination of concentration of solutions by the twosolvent method. I. Concentration of water-insoluble substances, A., I, 456. Influence of maturation of the coriander plant on properties of its essential oil, B., 287. Essential oil of Thymus marschallianus, Wild., B., 287. Determination in alcoholic solution, B., 876.

Spirito, A., embryonic biology. I. Anaërobiosis in petromyzonts and anurous amphibia, A., III, 126.

Spirk, L., preparation of motor lubricating oil, B., 518.

Spitaler, P., cast hydronalium, B., 51. Casting of elektron alloys, B., 1223. Spitta, O., potable water supply and hygiene,

B., 848.

Spitzer, E. E., anode materials for highvacuum tubes, B., 459.

Spitzer, L., determination of iodine and bromine in presence of each other, A., I, 44. Determination of formaldehyde and formic acid in the presence of one

another, A., II, 399.

Spivak, F. G. Sec Opotzki, V. F.

Spivak, G. Sec Reichrudel, E., Zacharjin, G.

Spivak, P. E. See Alichanov, A. I.

Šplichal, J., Skramovský, S., and Goll, J., stathmographic and kinetic investigation of thermal decomposition of limestone, A., I, 523.

Splitter, H. See Hessenland, M.

Splittgerber, A., treatment of mill processwater and boiler feed-water in the pulp and paper industry, B., 657.

Spoehr, \hat{H} . A., and Milner, H. W., starch isolated from plant material by the freezing method, A., III, 82.

Spokes, R. E., Willard, H. H., and Amer. Brakeblok Corp., friction element, (P.), B., 742

See also Lidkea, H.J.Sponer, H., and Bruch-Willstätter, M., lattice energy of solid carbon dioxide, A., I, 552.

Sponsel, K., finishing [textiles] with tylose, B., 661.

Spooner, C. E., and Mott, R. A., Sheffield laboratory coking test; relationship between swelling and coking power; effect of storage on coking properties; determination of durain in coking coal, B., 514.

See also Mott, R. A.

Spooner, E. T. C., and Bawden, F. C., serological reactions of potato-virus "X," A., III, 147.

Spooner, R. C., and Wang, H. H., composition of fats and oils commonly found in Szechwan, B., 1077.

Spoor, H.J. See Robinson, R.J. Spoor, N.L. See Anderson, J.S.

Sporkert, K., determination of magnification necessary for measuring Vickers pyramid impressions, B., 1142. Measurement with a new scratch-hardness tester, B., 1349. Spormann, W. See Meyer, Julius.

Sprague, A. D., and Nielsen, H. H., infrared absorption by H₂S, A., I, 166.

Sprague, C. A. See Sprague, P. T.

Sprague, G. F., relation of moisture content and time of harvest to germination of immature maize, B., 709.

Sprague, J. M., and Johnson, T. B., preparation of alkanesulphonyl chlorides from isothiocarbamides. II., A., II, 480. Sprague, P. T., Sprague, C. A., and

Soller, A., gas analysers, (P.), B., 519. Sprague Specialties Co. See Robinson, P.

Spraragen, W., designing welded chemical equipment, B., 930. Spray, R. S., and Stanley, A. R., protein-

sparing action of carbohydrates in relation to anaërobic identification, A., III, 358.

Spreckels Sugar Co., recovery of sugar [from beet molasses], (P.), B., 382. Spremulli, P. See Damerell, V. R.

Sprengel, L., scientific progress in chemical insecticides, B., 959.

Sprengnether, W. F. See Brady, J. J. Sprenkel, H. B. van der. See Krom, C. J. Spring, F. S., structure of triterpenes, A., II, 68.

and Vickerstaff, T., resinols. Structure of a-amyrenol, A., II, 159. See also Beynon, J. H., Heilbron, I. M.,

and Jones, E. R. H.

Springer, L., colorimetric determination of small quantities (maximum 0.1%) of iron oxide in raw materials and glass, B., 133. Yellow-green bottle glass from blast-furnace slag and without pyrolusite, B., 1338.

Springer, R., p_H of electroplating solutions, B., 247, 689. German electroplating practice, B., 452. Bright nickel-plating, В., 683.

Springer, U., evaluation of commercial humus fertilisers, B., 708.

Springer, W. See Pollak, L.

Springmann, (Frl.) H. See Schulze, K. Springorum, F. See Baukloh, W. Springorum, W., response of the skin blood

vessels to hormones, A., III, 490. See also Grosse-Brockhoff, F.

Sprinkel, K. M., flushed colours, B., 809. See also Mantell, C. L.

Sprinzak, Y. See Bergmann, E. Spriskov, A. See Fedorov, B. P. Spritzer, M. See Taschner, E.

Sproul, E. E. See Jobling, J. W. Sproule, W. H., and Hamilton, F. W., surface flavour in butter, B., 388.

Sprumont, G., rapid test for artificial cream and for its detection in fresh milk, B., 180. Sprunk, G. C. See Fieldner, A. O.

Spry, R., and Schutz, P., milling gold ores at Pioneer, B., 49.

Spulnik, J. See Kunz, A. H.

Spun Glass, Ltd., and Jackson, T., heatinsulating coverings made of spun glass, (P.), B., 301.

Spny, M. J. van der. See Gericke, A. M. Squibb & Sons, E. R. See Christiansen, W. G., Lott, W. A., and Nitardy, F. W.

Squier, T. L., and Madison, F. W., primary granulocytopania due to hypersensitivity to amidopyrine, A., III, 124.

Squire, G. F. See Cheshunt Sand & Gravel Co.

See Broughton, G., and Lewis, Squires, L. W, K.

Sreenivasan, A., nutritive value of raw and parboiled rices, B., 609.

and Subrahmanian, V., transformations of nitrogen in a swamp soil, B., 953. Nitrogen fluctuations in soil plots, B., 953.

See also Giri, K. V.

Sreenivasaya, M., preparation of a highly active alcohol apodehydrogenase from yeast, A., III, 98.

See also Adler, Erich, Bhagvat, K., and Sastri, B. N.

Srikantan, B. S., and Rengachari, S., utilisation of weeds. I. Gas production from Opuntia dillinii, B., 514. See also Reddy, C. R. N.

Srinivasan, M., ascorbic acid oxidase from drumstick, Moringa plerygosperma, A., III, 29. Individuality of ascorbic acid oxidase, A., III, 139. Enzymic determination of ascorbic acid, A., III, 406.

Srinivasan, P. S., elastic properties of mother-of-pearl, A., III, 376.
Srinivasan, T. K. See Dey, B. B.

Sriraman, S. See Rao, S. R. Srivastava, D. N., and Roach, W. A., injection of individual branches of a spur-pruned pear tree, B., 824.

See also Rogers, W. S.
Srivastava, P. D. See Godbole, N. N. Srivastava, R. C., and Sen, H. D., largescale experiments on treatment sugary-factory effluents, B., 986.

Stacey, M. See Haworth, W. N., and

Topley, W. W. C.

Stacey Brothers Gas Construction Co., storage reservoir for gas, steam, or volatile liquids and method of fabricating same, (P.), B., 858.

Stach, E., optical aids in dust analysis, B., 191. Microscopy of coments by reflected light, B., 554. Use of oil immer-

sion in coal microscopy, B., 859. Stacheeva-Kaverzneva, E. D., and Gavrilov, N. I., chemical structure of wool. I. Purification of keratin, A., III, 199.

and Oleinikova, E. J., proteolytic enzymes of the soya bean, A., III, 141. Fission of animal proteins by the proteases of Aspergillus oryzæ, A., III, 141. Stack, (Miss) A. M. See Glattfeld, J. W. E.

Stackelberg, M. von, Quatram, F., and Dressel, J. [with Spiess, C. F., and Kupffer, M.], volatility of boric acid with water vapour; system boric oxide-water, A., I, 136.

See also Chudoba, K. Stacy, S. V. See Bledsoe, R. P.

Stadie, W. C., and O'Brien, H., carbamate equilibrium. II. Equilibrium of oxyand reduced hæmoglobin, A., III, 110.

Stadler, automatic thermostat for constant temperature between 10° and 70°, A., I,

Stadler, O., operation of gas producers for carbonising retorts having [thermal] recuperation, B., 201.

Stadler, P., new reaction for lecithin and its application to determination of lecithin in dough products, B., 969.

and Wagner, Karl, detection of ethylvanillin (bourbonal), A., II, 268.

Stadnik, P. M. Sec Poljakov, M. V. Stadnikov, G. L., composition and origin of coal, B., 403. Humic acids, B., 866. and Falkovskaia, A. A., bitumens and

humic acids present in coals, B., 748. Putzillo, V. G., and Bakuschinskaja, L. N., Barzas coals, A., I, 588.

Staedtler, J. S., graphite writing and drawing leads, (P.), B., 1375.Stäger, A., flavouring and seasoning pre-

paration, (P.), B., 186.

Stager, H., topochemical considerations, B., 568. Practical experience with mineral oils and their changes with use, B., 870. Stähelin, F. R., applications of fractional

distillation to intermediate products in the laboratory, A., II, 372.

Staerker, A., vitreous china in the field of sanitary ware, B., 440.

Staff, E. J., and Grover, M. L., outbreak of Salmonella food infection caused by

filled bakery products, B., 179.

Staffelbach, F. See Schmid, E.

Stafford, H. M., conditioning of mineral

aggregate, (P.), B., 1210.
Stafford, W. L., and Johns-Manville Corp., thermal-insulating structure, (P.), B.,

Stahel, E., inner absorption of γ -rays in the

L shell, A., I, 160. and Ketelaar, H., diffusion of γ -rays without change of wavelength, A., I, 275. Ketelaar, H., and Kipfer, P., quantitative

interpretation of the y-radiation diffused by the radiator in lead, A., I, 275. See also Piccard, A.

Stahl, G. See Schwerdtfeger, F. Stahl, J., Atchley, D. W., and Loeb, R. F.,

adrenal insufficiency, A., III, 436. Stahl, R., and Aristo Corp., [foundry] core and oil therefor, (P.), B., 799.

Stahlwerke Röchling Buderus Akt.-Ges., [alloy] articles to resist attack by solutions containing free chlorine or hypochlorous acid, its salts or solutions thereof, (P.), B., 910.

Stainsby, W. J. See Green, T. G.

Stair, R. See Calingaert, G., and Coblentz, W. W.

Staker, E. V. See Wilson, B. D. Stalder, F. See Müller, O. A.

Staley Manufacturing Co., A. E., soya beans for consumption, (P.), B., 391. Sec also Gill, L. O.

Stalhane, J. P., ceramic compositions, (P.), B., 673.

Stälhed, J. See Kalling, B. Stallard, B. See Bell Telephone Labs.

Stallmann, B., crystalline insulin. IX. Crystallisation of insulin, A., III, 322.

Stallmann, O. See Du Pont de Nemours & Co., E. I.

Stalony-Dobrzański, J., preparation and density of aqueous hydrogen sulphide, and velocity of solution of hydrogen sulphide in water, A., I, 468.

Stamatin, N., adsorption of the sheep-pox virus on kaolin and animal charcoal, A., III, 228.

Stamatoff, G. S. See Akin, R. B. Stambovsky, L., epithelial anæsthesia, A.,

Stambuleanu, A., heat transfer during the inlet stroke of an internal-combustion engine, B., 1141.

Stamm, A. J., [minimising wood shrinkage and swelling]; treatment with sugar and invert sugar, B., 1056.

and Hansen, L. A., minimising wood shrinkage and swelling; effect of heating in various gases, B., 1056.

and Seborg, R. M., minimising wood shrinkage and swelling; treatment with synthetic resin-forming materials, B., 40.

Sec also Loughborough, D. L.

Stamm, H., and Wintzer, H., parachors of alkyl thiosulphites, A., II, 480.

Stamm, K. O. See Rogers, B. A. Stammer, H. J. See Clay, J.

Stamp, T. C., and Hendry, E. B., immunising activity of certain chemical fractions isolated from hamolytic streptococci, A., III, 116.

Stanco, Inc. See Sankowsky, N. A. Standard Alcohol Co., polymerisation of olefines, (P.), B., 20.

See also Archibald, F. M., Brooks, B. T.,

and Le Baron, R. F. Standard Brands, Inc., inhibiting mould growth on baked goods, (P.), B., 84. Recovery of osmium [from osmirid-ium], (P.), B., 358. Treating [oil-bearing] seeds, beans, otc., (P.), B., 1083.

See also Epstein, A. K., Gore, H. C., Kirby, G. W., Schultz, A., and Swift, F. R.

Standard-I. G. Co., and Birkby, H. S., soluble oils, (P.), B., 1166.
and Davis, G. H. B., purification and desulphurisation of low-boiling distillates, (P.), B., 873.

and Ellis, C., hydrogenated naphtha soap, (P.), B., 1368.

and Haslam, R. T., highly unsaturated or aromatic distillates from heavier oils, (P.), B., 872.

and Kiss, S. A., destructive hydrogenation [of hydrocarbon oils], (P.), B.,

Krauch, C., and Pier, M., conversion of carbonaceous substances, tars, mineral oils, etc., into more valuable products, (P.), B., 319.

and Pier, M., hydrocarbons of low b.p., (P.), B., 1011.

Pier, M., Engel, B., and Kroenig, W., conversion of carbonaceous materials, (P.), B., 1158. Pier, M., Jacob, P., and Simon, W.,

carrying out catalytic reactions, (P.), B., 318, 410.

Pier, M., Ringer, F., and Simon, W., conversion of liquid carbonaceous materials of high b.-p. range, (P.), B.,

Pier, M., Simon, W., and Kroenig, W., hydrogenation of distillable carbonaceous materials, (P.), B., 112.

Watts, R. N., and Harris, J. M., jun., removal of wax haze from an oil, (P.), B., 18.

Standard Oil Co., Adams, E. W., and Flint, G. W., hard-water-soluble oil, (P.), B.,

Adams, E. W., and McNulty, G. M., lubricant for free-wheeling, (P.), B., 755

and Anderson, John Arthur, dewaxing of hydrocarbon oils, (P.), B., 323. Dewaxing [of oil], (P.), B., 1303. Standard Oil Co., and Arveson, M. H., purifying mahogany soap, (P.), B., 1304.

and Bahlke, W. H., conversion of acid sludge into sulphur dioxide, hydrocarbons, and coke, (P.), B., 873.

Bahlke, W. H., and Whitman, W. G., distillation of hydrocarbon oils for production of lower-boiling hydro-

carbon oils, (P.), B., 413. and Broderson, H. J., cracking of hydro-

carbon oils, (P.), B., 1015.
and Burk, R. E., inhibiting gum in cracked distillates, (P.), B., 15. Altering b.p. of hydrocarbons, (P.), B., 15. Treatment of lubricating stocks containing amorphous wax, (P.), B., 755.

Chase, G. F., and Anderson, John Arthur, settling aid [in dewaxing petroleum

distillate], (P.), B., 18. and Diggs, S. H., solvent recovery in oil-

extraction processes, (P.), B., 210. Diggs, S. H., Beard, R. E., and Page, J. M., jun., insulating wax, (P.), B.,

Keith, P. C., jun., Forrest, H. O., and Horn, L. V., continuous rotary filter, (P.), B., 740.

Kuentzel, W. E., and Geissman, T. A., catalytic process [of polymerising olefines], (P.), B., 524.

and McConnell, E. B., treatment of cracked petroleum distillates, (P.), B., 114. Fractionation column equipment, (P.), B., 1289.

and MacLaren, F. H., synthetic lubric-ating oils, (P.), B., 211. Pour-point dopressors, (P.), B., 211. Castor oil [lubricating] composition, (P.), B., 413. and McNeil, C. P., asphaltic products,

(P.), B., 1010. and Montgomery, S. A., dewaxing of dis-

tillate oils, (P.), B., 1164. and Page, J. M., jun., recovery of high-m.p. paraffin wax, (P.), B., 1167.

and Parkhurst, G. L., solvent fractionation [of lubricating oil], (P.), B., 18.

Paulus, M. G., and Thompson, A. E.,
distillation of hydrocarbon oils, (P.),

B., 413.

and Roberts, E. N., storage of motor fuels, (P.), B., 1163.

Roberts, Joseph K., and Carpenter, M. T.,

gasoline, (P.), B., 17.
and Robinson, J., countercurrent contactor, (P.), B., 5. Treatment of petroleum sludges and sludge acids, (P.), B., 321. Purification of solvents, (P.), B., 1169. Emulsifying soaps, (P.), B., 1235.

d Rogers, F. M., desulphurising

nd Rogers, F. M., desulphurising petroleum oils, (P.), B., 114. and

and Rose, B. L., asphalt, (P.), B., 209. and Ruthruff, R. F., polymerisation of olefinic gases, (P.), B., 323. Conversion of hydrocarbon oils, (P.), B., 646.

Ruthruff, R. F., Roberts, Joseph K., and Carpenter, M. T., olefino concentration and polymerisation, (P.),

B., 320. and Shepard, J. H., lubricating oil

refining, (P.), B., 1166.
Shiffler, W. H., and Holm, M. M., catalytic hydration of propylenes, (P.), B., 1170. Distillation of alcohols, (P.), B., 1310.

Shoemaker, B. H., and Taylor, K. stabilisation of mineral oils, (P.), B., Standard Oil Co., and Simons, O. F., solvent fractionation of motor fuel stock, (P.), B., 872. High-antiknock gasolino, (P.), B., 1162.

Simons, O. F., and Croxton, F. C., extraction of lubricating oils, (P.), B., 1166.

and Sparks, J. W., road oils, (P.), B., 1301.

and Sullivan, F. W., jun., solvent fractionation [of cracked motor fuel stock],

(P.), B., 16.
Sullivan, F. W., jun., and Ruthruff, R. F., treatment of hydrocarbon oil, (P.), B., 323.

and Voorhees, V., wax sweating, (P.), B., 521.

and Watts, W. W., bubble-tray construction, (P.), B., 995.

and Wilson, R. E., continuous countercurrent contacting of two liquids, (P.), B., 5. Contacting two materials, (P.), B., 5. Contacting two liquids, (P.), B., 5.

Standard Oil Co. of California, asphaltic material, (P.), B., 157. Coating of pipes, etc., (P.), B., 309. Mineral lubricating oil composition, (P.), B., 756. Synthetic hydrocarbon oils, (P.), B., 1013.

Brown, E. S., and Nutt, D. B., refining of petroleum distillate, (P.), B., 1160. and Field, E., petroleum sulphonic acids

and sulphonates, (P.), B., 412.
and Fossati, F. N., determination of the physical characteristics of metals [high-pressuro steel tubes], (P.), B.,

and Gay, N. N., emulsifiable oil product, (P.), B., 412.

and Hampton, W. H., insecticide and

germicide, (P.), B., 1256. and Harger, D. K., manufacture of green-bloom lubricating oils, (P.), B., Ī166.

and Kremser, A., gas analysis, (P.), B., 1159.

and Maker, F. L., apparatus for fractional distillation, (P.), B., 99.

Standard Oil-Co. of Indiana, McGee, J. M., and Roe, R. M., desulphurising gas-

oline, (P.), B., 17.
McNeil, C. P., and Montgomery, S. A., asphalt oxidation system, (P.), B., 18. and Plummer, W. B., catalyst [for hydrogenation of oils, etc.], (P.), B., 210.

and Roberts, Joseph K., conversion of hydrocarbon oils, (P.), B., 521.

and Ruthruff, R. F., conversion of hydrocarbons, (P.), B., 645. and Sullivan, F. W., jun., conversion of hydrocarbons, (P.), B., 19. Hydrocarbon products from acid sludge,

(P.), B., 413. and Villars, D. S., conversion of hydro-

carbons, (P.), B., 645. and Youtz, M. A., non-flammable [dry-]

cleaning solvents, (P.), B., 16. Standard Oil Co. of Ohio, fibrous cellulose container for oils, etc., (P.), B., 1324. Burk, R. E., and Hughes, E. C., treatment of [solutions containing] sodium

hydroxide, (P.), B., 35. Standard Oil Development Co., acetylene, (P.), B., 14. Treatment of hydrocarbon oils with selective solvents, (P.), B., 16. Conversion of ethers into alcohols, (P.), B., 21. Adherent greases, (P.), B., 60.

Standard Oil Development Co., solvent, extraction of lower-boiling hydrocarbons, (P.), B., 115. Preparation and use of polyester compounds, (P.), B., 213. Lubricating oils, (P.), B., 520, 1015. Fatty oil polymer[ide]s, (P.), B., 587. Artificial asphalts, (P.), B., 644. Polymer[ide]s, (P.), B., 644. merisation of olefines, (P.), B., 757. Pyrolytic reforming of motor fuels, (P.), B., 1014. Hydrocarbon oil lubricating compositions, (P.), B., 1015. Polymer[ide]s of isobutylene, (P.), B., 1019. Recovery of selective solvents used in treatment of oils, (P.), B., 1161. Lubricants, (P.), B., 1165. Lubricating compositions, (P.), B., 1165.

and Archibald, F. M., stabilisation of white oils, (P.), B., 644. Purification of [oil-refinery] acid sludge, (P.), B., 1304.

and Baskin, C. M., bituminous pavement, (P.), B., 1346.
and Bird, J. C., obtaining products from

[hydrocarbon oil] acid sludge, (P.), B., 114. Colloidal dispersions of metals in oils, (P.), B., 148. Composition obtained from hydrocarbon acid

sludge, (P.), B., 320.

and Bue, H. E., stabilised refined mineral, vegetable, and animal oils, (P.), B., 210. Insecticide, (P.), B., 604. Motor fuel, (P.), B., 755. Presenting forming of foil in water lemulating forming of foil in water lemulating forming of foil in water lemulating forming of foil in water lemulating forming of foil in water lemulating forming of foil in water lemulating forming of foil in water lemulating forming of foil in water lemulating forming of foil in water lemulating forming of foil in water lemulating forming of foil in water lemulating forming of foil in water lemulating forming of foil in water lemulating forming forming forming of foil in water lemulating formi venting foaming of [oil-in-water] emulsions, (P.), B., 1164.

Bnc, H. E., and Rosen, R., carbon remover and method of using the

same, (P.), B., 754.

Buc, H. E., and Schuler, R., alkylphenols from petroleum hydrocarbons, (P.), B., 651.

Carlson, E. W., and Wiezevich, P. J., fuel-coating composition, (P.), B.,

Carrier, E. W., and Reeves, E. D., separation of saponifiable from un-

saponifiable compounds, (P.), B., 1167. and Davis, G. H. B., lubricating composition, (P.), B., 1306. Crystallisation inhibitor for paraffin wax in lubricating oils, (P.), B., 1306.

and Donlan, T. R., treatment of hydro-

carbons, (P.), B., 16.

Eberle, W. A., and Zepfler, L. H., dewaxing of oils, (P.), B., 1164.

Edwards, D. F., and Starr, J. V., solvent extraction of petroleum distillates, (P.), B., 16.

and Ellis, C., liquid composition containing rubber, (P.), B., 474. Paper material carrying a resin of petroleum origin, (P.), B., 658. Treatment of lubricating and other oils, (P.), B., 1306.

Farr, W. D., and Samuel, F. B., separation of oil from slack wax, (P.), B., 1306.

Forrest, H. O., Marek, L. F., and White, Abraham, obtaining distillates from hydrocarbon oils by action of water under high pressure and temperature, (P.), B., 320.

and Frolich, P. K., rubber composition containing petroleum resins, (P.), B., 67. Conversion of mercaptans, (P.), B., 325. Carbon-black manufacture, (P.), B., 1300,

Frolich, P. K., and Wiezevieh, P. J., mercaptan conversion, (P.), B., 758. Aldehydes, (P.), B., 877.

Standard Oil Development Co., and Fulton, S. C., aldehyde synthetic resins pre-pared from petroleum, (P.), B., 263. Preparation of resins and asphaltenes, (P.), B., 1301.

Fulton, S. C., and Kalichevsky, V. A., articles fabricated with asphaltenes,

(P.), B., 319. Fulton, S. C., and Kunc, J., synthetic resins of petroleum origin, (P.), B.,

Fulton, S. C., and Vesterdal, H. G., [stable] soaps and products thereof, (P.), B., 1368.

Goss, H. F., and Opryshek, J., dewaxing of hydrocarbon oils, (P.), B., 1164.

and Howard, F. A., motor fuel containing olefine polymerides, (P.), B., 1163.

and Kalichevsky, V. A., desulphurising a petroleum oil distillate, (P.), B., 114. Kettenring, L. C., and Robertson, L. H., dewaxing of [petroleum] oils, (P.), B.,

and Loupe, B. A., oil and gas separator, (P.), B., 521.

and Maverick, G. M., fuel for high-pressure liquid fuel injection engines, (P.), B., 1014.

Mikeska, L. A., and Turner, L. B., lubricants, (P.), B., 1165.

Moore, T. V., and Cannon, G. E.,

weighted oil-base drilling fluid, (P.), B., 1166.

and Mudge, C. W., impregnation of wood [with montan wax], (P.), B., 350.

and Noel, H. M., cooling and granulation of asphalt, (P.), B., 1301.

Packie, J. W., and Stines, D. E., distillation of fluids at Iow temperatures, (P.), B., 1290.

and Rhodes, A. V., dewaxing of paraffin distillates, (P.), B., 18. and Rickles, N. H., stabilising dyed

hydrocarbon liquids, (P.), B., 1163. Rosson, M. M., and Fasce, E. V.

synthetic colouring matter [for lubri-

cating oils], (P.), B., 1026. and Schneider, H. G., removal of gumforming constituents, sulphur com-pounds, and colour compounds from naphtha, (P.), B., 1303. Schneider, H. G., and Sommer, J. V.,

oxygenated organic compounds from

olefines, (P.), B., 1019.

Schonberg, J. R., and Robinson, W. E., debutanisation of naphtha, (P.), B., 521.

and Seaman, W., sulphur resins, (P.), B., 470.

Shaffer, S. S., and Fasce, E. V.lubricating-oil dyestock, (P.), B., 1015. and Sloane, R. G., pour-point depressant of high strength [for waxy lubricating oils], (P.), B., 1014. and Steik, K. T., alcoholamine mineral

oil sulphonates, (P.), B., 1304.

and Stratford, R. K., cracking of mineral oils, (P.), B., 15. Treatment of lubricating oils with phenol at high temperatures, (P.), B., 1166.
Stratford, R. K., and Gurd, G. W.,

treating residual oils with a selective

solvent, (P.), B., 16.
Stratford, R. K., and Huggett, J. L., lubricants, (P.), B., 211.

and Turner, L. B., organic disulphides, (P.), B., 117.

and Vesterdal, H. G., refining fatty acids, (P.), B., 417.

Standard Oil Development Co., Vesterdal, H.G., and Carlson, E. W., purification and separation of [hydrocarbon oil] sulphonates, (P.), B., 325.

and Wells, A. A., treatment of naphtha, (P.), B., 320.

and Wiezevich, P. J., ceresine, (P.), B., 115. Pyrolysis of acetic anhydride, (P.), B., 649. d Wilson,

and id Wilson, A. M., dewaxing of [petroleum] oils, (P.), B., 1164.

Wilson, A. M., and Crosby, O. E., filter press, (P.), B., 1147.

Winning, C., Sargent, L. E., and Dudley, J. F., inhibiting gum formation in naphthas and products obtained thereby, (P.), B., 320.

Winning, C., and Thomas, Robert M., forming a plastic product from eracking oil tar, (P.), B., 1372.

Winning, C., and Young, P. L., oils of low pour point, (P.), B., 1014. See also I. G. Farbenind.

Standard Process Corporation. See Ericksson, E.

Standard Register Co., carbon paper and similar transfer materials [with portions non-transferring], (P.), B., 948.

Standard Ultramarine Co. See Dourif, H. Standel, E.G. See Pamfilov, A.V

Stanek, V., and Pavlas, P., boiling up clarified [beet] juice, B., 379. Rapid determination of calcium in clarified [sugar] juice, using a simple turbidimeter, B., 1111. "Respiration" of raw meter, B., 1111.

sugar, B., 1113. Stanfield, J. F., p_{Π} and sexual expression in Lychnis dioica, L., A., III, 236.

Stanford, C. L. See Nichols, E. L. Stanford, K., and Adamson, D. C. M., rapid determination of antimony in lead-rich alloys, B., 354.

Stange, O. See Windaus, A. Stanger, H. See Criegee, R.

Stanischevski, A. I., application of tartaric acid to preparation of blue-print paper, В., 394.

Stankoff, E. See Santenoise, D. Stanley, A. J. See Witschi, E. Stanley, A. R. See Spray, R. S. Stanley, E. See Brit. Celanese.

Stanley, H. M. See Distillers Co. Stanley, J., refractometric determination of

fat in chocolate, B., 493.

Stanley, W. M., virus of tobacco mosaic. VIII. Isolation of a crystalline protein possessing the properties of aucuba-mosaie virus. IX. Correlation of virus activity and protein on centrifugation of protein from solution under various conditions. X. Activity and yield of virus-protein from plants diseased for different periods, A., III, 100, 147, 489. Crystalline to bacco-mosaic virus, A., III, 228. Isolation of a crystalline protein possessing the properties of

aucuba-mosaic virus, A., III, 358. and Wyckoff, R. W. G., isolation of tobacco ring spot and other virus proteins by ultracentrifugation, A., III, 228.

See also Lemon, J. M.

See also Lavin, G. I., Loring, H. S., and Wyckoff, R. W. G.

Stanley, W. W. See Marcovitch, S. Stanley-Brown, M. See Chargaff, E. Stannard, J. N. See Stier, T. J. B. Stanolind Oil & Gas Co. See Bays, G. S. Stansby, M. E., and Lemon, J. M., determination of oil in fish flesh, B., 1124.

Stansfield, A., metallurgical research at

McGill, B., 451.

Stanworth, J. Sce Adam, W. B.

Stanworth, J. E., reactions in the solid state, with special reference to reactions between silica, sodium carbonate, calcium carbonate, and alumina, A., I, 321.

and Turner, W. E. S., effect of small additions of alumina on reactions in the mixtures $6SiO_2 + Na_2CO_3 + CaCO_3$, B., 1048. Effect of small additions of water on reactions in the mixture $6SiO_2 + Na_2CO_3 + CaCO_3$, B., 1048. Effect of small additions of sodium sulphate on reactions in the mixture $6SiO_2 + Na_2CO_3 + CaCO_3$, B., 1204.

Stapleford, G. H., ceramic decalcomania, B., 37.

Staples, L. W., mineral determination by microchemical methods, A., I, 97.

Starck, H. Soe Maurer, K., and Stoermer,

Stare, F. J., effect of fumarate on respiration of liver and kidney, A., III, 61. and Baumann, C. A., effect of fumarate on respiration, A., III, 61. See also Karrer, P.

Stargardter, A. R., hardening razor-blade steel, B., 561.

and Gillette Safety Razor Co., treatment of metal [steel strip], (P.), B., 931. Staritzuina, T. V. See Brusilovskaja, A. I.

Stark, A. L., unfrozon water in apple shoots as related to winter hardiness, A., III, 235.

Stark, C. N., correlation between spoilage of butter and presence of fat-splitting and casein-digesting bacteria, B., 1123.

and Curtis, L. R., growth-promoting and -inhibiting substances present in brilliant-green-bile media, A., III, 274. Increased growth and gas production by Escherichia-Aerobacter organisms in brilliant-green-bile media containing sodium formato, A., III, 274.

and Scheib, B. J., fat-splitting and caseindigesting bacteria isolated from butter, B., 1123.

See also Guthrie, E. S., and Safford, C. E. Stark, D. D., Edwards, T. O., jun., and Associated Oil Co., acid treatment of oils, (P.), B., 1162.

Stark, J., structure of the electron and superconductivity, A., I, 292. Structure and stationary states of hydrogen and helium atoms, A., I, 335. Cessation of axiality of the hydrogen atom and the helium atom ion by electric field and radiation collision,

A., I, 435. and Steiner, K., magnetic induction in superconductors, A., I, 292. Explanation of magnetic induction in superconductors, A., I, 504.

and Verleger, H., effect of number of electrons on the polarisation of light emitted by positive rays, A., I, 335. Series law of polarisation of light emission of positive rays, A., I, 335. Intensity ratio of moving and stationary series lines of hydrogen and helium, A., I, 335.

Stark, J. B., and Gilbert, E. C., apparent molar volume of inorganic salts in methyl alcohol solution, A., I, 613.

Starke, K., surface area of mixed catalysts and changes in it caused by reactions in

the solid state, A., I, 624.

Starkey, E. B., diazonium borofluorides. II. Their use in the preparation of nitro-compounds, A., II, 406. See also Dunker, M. F. W.

Starkey, R. L., sulphide formation by sulphur bacteria, A., III, 99.

Starkiewicz, J., value of absorption coefficient of hard γ -rays of radium in beryllium, A., I, 210. See also Gentner, IV.

Starkweather, H. W., and Walker, H. W., influence of metallic oxides on neoprene

properties, B., 1084. Starling, W. W. See Rosenheim, O. Starnes, F.C., development of photographic images, (P.), B., 1277. Photographic developers, (P.), B., 1277.

Starobinetz, G. L., and Romisch, V. P., relation between heat of vaporisation and surface tension, A., I, 230.

Staroseletz, E. See Tschulkov, J.

Starr, C., determination of thermal diffusivities, A., I, 201. Copper oxide rectifier, B., 254.

Starr, J. V. See Standard Oil Development

Co.

Starr, P., thyrotropic pituitary hormone, A., III, 73.

Stasiw, O., binding of excess of potassium in potassium halido crystals, A., I, 217. Staszewski, H. See Hrynakowski, K. State, H. M. See Furman, N. H.

Stather, F., colloid-chemistry of vegetable tanning, B., 69. Examination and evaluation of artificial leather and leather substitutes, B., 818.

and Endish, O., characteristics of vegetable tannins. XII. Tanning properties of sulphite-collulose waste tan-

ning extracts, B., 817.

and Herfeld, H., resistance of light metals [aluminium alloys] to corrosion by vegetable tannins, synthetic tannins, sulphite-cellulose waste extract, and different curried vegetable-tanned leathers, B., 475. Curing processes. VI. Effect of mode of curing on the manufacture and properties of tho leather, B., 950.

and Schubert, R., alteration and combination with vegetable-tanned leathers of oils and fats contained therein. X. The fat-liquoring process, B., 1381.

Stather, J. See Bömer, A. Stathis, E. See Zenghelis, C.

Staub, A. See Ruggli, P.

Staub, A. M. See Bovet, D., and Simon, Aanette.

See Wendel, F. B.Stauber, A. Staud, A. H. See Gaul, L. E. Staud, C. J. See Eastman Kodak Co.

Staudinger, H., macromolecular chemistry, A., I, 19. Highly polymerised compounds. CLIII. Constitution of cellulose, A., I, 172. Collulose, starch, and glycogen, A., II, 446. Significance of macromolecular chemistry in

biology, A., III, 328. and Becker, H. von, highly polymerised compounds. CLVI. Polyammonium compounds of high mol. wt. CLVII. Measurements of the viscosity of amino-acids, A., II, 280.

and Daumiller, G., highly polymerised compounds. CLIV. Cellulose acetates and celluloses, A., II, 278.

and Feuerstein, K., highly polymerised compounds. CXLVII. Degree of polymerisation of natural and technical celluloses, A., II, 7.

Staudinger, H., and Husemann, E., highly polymerised compounds. CL. Constitution of starch. CLV. Constitution of glycogen. CLXI. Determination of the mol. wt. of polysaccharides by the terminal group method, A., II, 87, 326.

and Mojen, H. P., isoprene and caout-chouc. XLVI. Viscosity measure-ments with "gel solutions" of caout-chouc and hydrocaoutchouc, B., 371.

and Schulz, G. V., highly polymerised compounds. CLXV. Osmotic measurements with cellites in glacial acetic acid, A., II, 370.

and Sorkin, M., highly polymerised compounds. CLXII. Hydrocelluloses, A., II, 370. CLXVIII. Determinations of the viscosity of cellulose nitrates, A., II, 370, 447.

Sorkin, M., and Franz, Ehrhart, dependence of strength properties of cellulose fibres on their degree of polymerisation, B., 1185.

and Werner, A. E., highly polymerised compounds. CLXXV. $K_{\rm m}$ constants of cellulose acetates, A., II, 487.

Staudinger, H. P. See Distillers Co. Stauff, A. M. See Lauter, W. M. Stauffer, C. H. See Kistiakowsky, G. B. Stauffer, R. E. See Jones, G.

Stauffer, R. S., variability in Wisconsin till and its influence on soil character, A., I, 588. Influence of soil management on some physical properties of a soil, B., 1248.

Stauffer Chemical Co. See Missbach, E. C. Staveley, L. A. K., and Hinshelwood, C. N., inhibition by nitric oxide of decomposition of ethers, A., I, 368. Reaction chains in decomposition of

organic compounds, A., I, 569. Staveley Coal & Iron Co., Ltd., and Fabry, R., annealing furnaces, (P.), B., 356.

Stavely, H. E., and Bergmann, W., unsaturated steroids. I. Constitution of cholesterilene. II. Preparation and properties of $\Delta^{2:4}$ -cholestadiene. III. Titration of unsaturated steroids with thiocyanogen, A., II, 289.

Staveren, (Frl.) C. H. van. See Ketelaar, J. A. A.

Staverman, A. J., cohesive energy of liquid

mixtures. I., A., I, 507.
Stavraky, G. W. See Keith, H. M.
Stavrovskaja, V. I. See Ismailski, V. A.
Steacie, E. W. R., reaction of deuterium atoms with methane at high temper-

atures, A., I, 568.

and Alexander, W. A., use of deuterocompounds as indicators for the presence of free radicals in organic decomposition reactions, A., II, 323. Free radicals in organic decomposition reactions. I. Thermal decomposition of mixtures of methyl ether and deutcracetone, A., II, 396.

and Folkins, H. O., decomposition of nitrous oxide on a silver catalyst, A.,

and Katz, S., homogeneous unimolecular decomposition of gaseous alkyl nitrites. VIII. Decomposition of ethyl and npropyl nitrites at low pressures, A.,

and Phillips, N. W. F., thermal decomposition of ethane, A., I, 312 Stead, A. M. See Gericke, A. M.

Stearn, A. E., and Eyring, H., deduction of reaction mechanisms from the theory of absolute rates, A.; I, 246.

Stearns, G., and McKinley, J. B., conservation of blood-iron during physiological hæmoglobin destruction in early infancy, A., III, 473. and Stinger, D., iron retention in infancy,

A., III, 473.

and Warweg, E., phosphorus of blood. IV. Phosphorus partition in blood of children with disease, A., III, 255.

See also Catherwood, R.
Stearns, J. C. See Froman, D. K.
Stearns, L. A., Williams, L. L., and
Haden, W. R., control of the plum curculio in Delaware, B., 274.

Stearns, W. V., and Sun Oil Co., apparatus for purifying mercury, (P.), B., 581. Process for purifying mercury, (P.), B., 581.

Steatit-Magnesia Akt.-Ges., insulating parts or members in electrical apparatus, (P.), B., 361. Powdered iron cores for highfrequency electrical coils, (P.), B., 937. Electrical insulating materials, (P.), B., 1075.

Steatite & Porcelain Products, Ltd., and Sugden, J. A., electric potential sensitive devices, (P.), B., 1076. Refractory ceramic bodies containing titanium

dioxide, (P.), B., 1343. Stebnitz, V. C., and Sommer, H. H., age thickening of sweetened condensed milk. IV. Effect of salts, B., 280. Oxidation of butter fat. I. Catalytic effect of light. II. Composition of fat and susceptibility to oxidation, B., 723. Soap from oxidised fats, B., 942. Effect of composition of butter fat on susceptibility of oxidation, B., 1261.

Stecher, J. L. See Du Pont de Nemours & Co., E. I. Steck, L. V. See Internat. Hydrogenation

Patents Co.

Stedehouder, P. L. See Langedijk, S. L. Stedman, D. F., packed fractionating columns, A., I, 636. Fractionating columns of high efficiency, B., 853.

Stedman, E. See Easson, L. H., and White, A. C.

Stedman, Edgar, and Stedman, Ellen, mechanism of the biological synthesis of acetylcholine. I. Isolation of acetylcholine produced by brain tissue in vitro, A., III, 259.

Stedman, Ellen. See Stedman, Edgar. Steedman, H. F., calcium iodate as a temporary preservative, A., III, 447.

Steel Brothers & Co., Ltd., and Bhatnagar, S. S., refining of mineral oils, (P.), B., 411.

Steele, B. F. See Felton, L. D.

Steele, F. A., optical characteristics of paper. III. Opacifying power of fibres and fillers, B., 770

Steele, J. M. See Cohn, A. E.

Steenbeck, M., field-strength in column of the glow discharge in light and heavy hydrogen, A., I, 53. Rôle of positive ions in the initiation of a gaseous discharge, A., I, 104.

See also Engel, A. von. Steenbock, H. See Hayward, J. W.,

Irwin, M. H., and Lowe, J. T. Steenhauer, A. J. Sec Itallie, L. van. Steensberg, V., influence of feeding-stuffs

on colour, etc., of flesh of cattle, B., 390. Steer, W., observations on codling moth (Cydia pomonella, L.) in 1936, B., 827.

See also Shaw, H. Steever, A. M., production of drop and hammer forgings, B., 1217.

Steeves, W. H. See Hibbert, H.

Stefanelli, A., cyclic consumption of oxygen during the first divisions of the eggs of frogs and toads, A., III, 465.

Stefanovitch, G. See Mitchovitch, V. M. Stefanovitsch, I. P., technique of measuring peptisation processes in proteolysis, A., III, 288.

Stefanovski, V. F. Sco Zanko, A. M. Stefanowski, B., and Szczeniowski, B., influence of compression ratio and preheating of mixture on behaviour of fuels containing alcohol in the internalcombustion engine, B., 109.

Stefanowski, W., and Kraczkiewicz, Z., analysis of natural resins, B., 588.

Stefansson, K. Sco Møller, K. O. Stefec, R. See Křepelka, V.

Steffelaar, J. M., gas density (d) and litro weight of gas in grams (l_g) , B., 989.

Steffen, E. See Saegebarth, E.

Steffens, W., usefulness of the [potassium] permanganate number in determining degree of contamination of effluents, B., 849.

See also Haupt, H.

Stefkin, F. S., Sokolov, M. M., and Slesareva, M. S., chlorination of phosphorites for production of ammophos, B.,

Steff, J., influence of feeding vitamin-Don frog's larvæ, A., III, 327.

Steger, A., and Loon, J. van, fatty oil from the seeds of Valerianella olitorea, Poll, B., 1080. Oil from seeds of Onguekoa Gore, Engler, B., 1080.

Steger, W., 8-hydroxyquinolino method for rapid determination of alumina, A., I, 149. Replacement of whiting by magnesite in vitrified ware and pottery, B., 549. Resistance and protection ceramic materials in chemical plant, B., 1340.

Stehle, R. L., and Ellsworth, H. C., dihydroxyphenylethanolamine (arterenol) as a possible sympathetic hormone, A., III, 152.

Stehn, J. R., theory of the electronic energy levels of simple hydrides, A., I, 223. See also Breit, G., and Share, S.

Stehr, C. N., and Tretolite Co., breaking petroleum emulsions, (P.), B., 321.

Steiger, B., surface reactions, and some reactions in organic solvents, A., I, 422. Organo-metallic compounds, particularly lead tetraethyl, in the mineral oil industry, B., 1006. Detection and determination of organo-metallic compounds, especially of lead tetraethyl and nickel carbonyl, B., 1131.

Steiger, H., and Rupe, H., teresantalic and isoteresantalic acid, A., II, 509.

Steiger, M., and Reichstein, T., constituents of the adrenal gland. IX. Function of the last oxygen atom, A., II, 380. 45-3-Hydroxyætiocholenic acid and its transformation products, A., II, 499. Constituents of the adrenal gland. XII. Deoxycorticosterone (21-hydroxyprogesterone) from 45-3-hydroxyatiocholenic acid, A., II, 507. Partial synthesis of a crystallised compound with the biological activity of the adrenalcortical hormone, A., III, 277. See also Morsman, H.

Steiger, R. E. See Allen, A. J., and Magill, M. A.

Steiger, W. See Akt.-Ges. f. Bier- & Weinprodukte.

Steigmann, A., emulsion practice with aqueous carbamide-protein solutions, A., I, 515. Photographic chemistry of cystine, A., II, 281. Advances in [photographic] emulsion technique, B., 89. New synthetic [photographic ripening] retarding agent, B., 394. Preparation of photographic emulsions, B., 499. Application of Sheppard compounds and materials related to cystine, B., 621. Photo-active xanthine dyes, B., 881. Admixtures improving quality of photographic emulsions and developers, B., 982. Resinification of sterols, B., 1086. Steik, K. T. See Standard Oil Develop-

ment Co.

Stein, F., simple tests for resistance of glasses to atmospheric corrosion, B., 546.

Stein, G. See Alder, K. Stein, H. B., Radetsky, M. H., and Lewis, R. C., nutritional anamia in rats alleviated by evaporated milk and iron, A., 111, 89.

Stein, H. I. See Gertler, S. E.

Stein, O. See Kühn, H. Stein, W. See Muller, H.

Stein & Atkinson, Ltd., and Booth, T. A., gas producers, (P.), B., 410. See also Higginbottom, H. B.

Steinach, E., and Kun, H., transformation of male sex hormones into a substance with the action of a female hormone, A., III, 492.

Steinbach, A., new testing apparatus for oil used in cooling [machines], B., 1157.

Steinbach, H. B., potassium and chloride in Thyone muscle, A., III, 472. Potass-

ium in frog skin, A., III, 474.
Steinbeck, H. J. See Reif, G.
Steinberg, A. See Rowntree, L. G.
Steinberg, A. D., creatine dynamics in pigeon's muscle under influence of various pharmacological agents. II. Poisons of central and vegetative nervous systems, A., III, 26.

Steinberg, B., and Toledo Hospital, preventive inoculation, more particularly for

peritonitis, (P.), B., 499.

Steinberg, I. R., blood-cholesterol in the preagonio period of tuberculosis, A., III, 172.

Steinberg, R. A., effects of barium salts on Aspergillus niger and their bearing on sulphur and zinc metabolism of the fungus in an optimal solution, A., III, 34. Effects of heavy metals essential for nutrition of Aspergillus niger on its growth, A., III, 34.

Steinberg, S. S., transformation of austenite and theory of hardening of steel, B.,

Susin, V., and Goldin, I., transformations of austenite in a chromium-silicon steel, B., 791.

Steinbrecher, H., and Kühne, H., solvent refining of mineral oils, B., 407. Analysis of mineral oils with solvents, B., 749. Cold fractionation of mineral oils with solvents, B., 749. Solvent extraction of lubricating oils from crude oils, B., 870.

Steinbrink, H. See Lipp, M.

Steinbrocker, O. Seo Hartung, E. F. Steiner, D., composition, production, and technical properties of Portland cements, B., 552.

Steiner, Dora. See Freundlich, H. Steiner, H. See Gross, P. Steiner, K. See Stark, J.

Steiner, L. F., Sazama, R. F., and Fahey, J. E., insecticide tests to control codling moth at Vincennes, Indiana, laboratory, 1934, B., 714.

Steiner, M., histochemical notes on betulin, A., III, 246.

See also Lohaus, H.

Steiner, R. See Nagy, J.

Steiner, W. F. See Johnson, E. A. Steingardt, B. S. See Sitnik, Z. P.

Steinhardt, J., total dissociation of horse hæmoglobin, A., III, 2.

Steinhaus, W., Kussmann, A., and Schoen, E., saturation magnetisation and approximation law of iron, A., I, 605. and Schoen, E., automatic recording of magnetisation curves, A., I, 153.

Steinheisser, M., regenerative furnaces, (P.), B., 96.

Steinherz, A. R., lime-saturation value and chemical composition [of cements], B., 442.

Steinhoff, G. See Kröner, W. Steinitz, E. W., prevention of freezing in liquid-cooled automobiles, B., 1284.

Steinke, G. See Böhme, H.

Steinke, L. See Scheele, W. Steinkopf, W., thiophen series. XXXIX. Constitution of the salts of the phenylhydrazone of αβα'β'-thiophenobisthio-chromone [bis(benzthio-1:4-pyrono-2:3)-2':3':5':4'-thiophen], A., II, 515.

and Gording, R., thiophen series. XXXVI. 2-Phenylthiophen-5-carboxylic piperidide, a pepper-like substance of the thiophen series, A., II, 514.

and Hanske, W., thiophen series. XXXIV. Iodine derivatives of 2-methylthiophen. XXXVII. Iodo-derivatives of 3-thiotolen, A., II, 163, 514.

and Killingstad, A., thiophen series. XL. Mercury derivatives of thiophen, A., II, 516.

nd Köhler, W., thiophen series. XXXVIII. Chloro-derivatives of thiophen and applicability of mixed m.p. among isomeric thiophen derivatives, A., II, 514.

Petersdorff, H. J. von, and Gording, R., thiophen series. XXXV. aaa-Tetra-

thienyl, A., II, 163.

Sohmitt, H. F., and Fiedler, H., thiophen series. XXXIII. Iodine derivatives of thiophen and their reaction with thiosalicylic acid, A., II, 163.

Steinmann, A. See Jäppelt, A. Steinmann, B., effect of iodine prophylaxy on the thyroid gland of the new-born, A., III, 133.

Steinmann, R. See Jayme, G.

Steinmann, W., apparatus for treating animal matter such as carcases, slaughterhouse offal, fish offal, etc., (P.), B., 1130. Steinruck, K. See Serini, A. Steinwehr, H. E. von, $a-\beta$ transformation

of quartz, A., I, 402.

and Schulze, A., heat effect in magnetic transformation of nickel, A., 1, 120.

Stekol, J. A., metabolism of bromobenzene in growing dogs and mice maintained on adequate diets, A., III, 61. Synthesis of p-bromophenylmercapturic acid by fasting growing dogs, A., III, 61. Metabolism of benzene, anthracene, and phenanthrene in adult and growing dogs, A., III, 62. Mercapturic acid synthesis in animals. I. Effect of diets of varying sulphur content on the extent of synthesis of p-bromophenylmercapturic acid in dogs, A., III, 91.

Stekol, J. A., p-bromophenylmcrcapturic acid and ethereal sulphate synthesis in dogs maintained on diets of varying sulphur content, A., III, 175.

[with Foy, J. R.], mercapturic acid synthesis in animals. III. Relation between time of administration of food and of bromobenzene and extent of pbromophenylmercapturic acid syn-

thesis in dogs, A., III, 173. and Hamill, W. H., synthesis of protein and amino-acids in mice with the aid of deuterium, A., III, 173. Non-labile deuterium of amino-acids treated in dilute deuterium oxide media, A., II, 448.

and Mann, F. C., mercapturic acid synthesis in animals. II. Rôle of bile in absorption and detoxication of bromobenzene and naphthalene in the dog, A., III, 132.

Stella, A., characteristics of Italian metalliferous deposits in basic rocks, A., I, 155.

Stelletki, T. See Kurdjumov, G. Stelljes, A. J., metallography of aluminium forging alloys, B., 355. Surface attack

of light metals, B., 1356. Stemen, W. R. See Urbain, O. M.

Stempel, B., mutual replacement of growth factors in plant nutrition, B., 167.

Stempell, W., Romberg, G. F. von, and

Ulpts, R., distant action of lead on plants, A., III, 47.

Stender, V. V., and Artamonov, B. P., electrochemical protection of iron from corrosion in alkalis, B., 1213.

Artamonov, B. P., and Bogojavlenskaja, K. J., electrochemical protection of iron from corrosion by alkalis, B., 797. Jornitsky, J. G., and Sabo, B. G., acidproof diaphragms, B., 802. and Shornitzki, I. G., electrolytic prepar-

ation of ammonium persulphate. I. Potential balance data, A., I, 568.

Stene, A. E., fertiliser treatment of red raspberries, B., 601. Fertiliser treat-ment of grapes, B., 601.

Stene, S., transport of solutes by flowing liquids, B., 988.

Stenger, E., classification and grouping of methods of natural-colour photography, B., 1409.

Stengl, R. J. See Davis, S. H.

Stenhouse, D., and Hazel-Atlas Glass Co., melting of glass by electricity, (P.), B.,

Stenhouse, E. E. Sce Friedemann, T. E. Stenmark, G. See Stewart, T. D.

Stenn, F., atiologic relation of amidopyrine to agranulocytosis, A., III, 11. Stensig, S., iodometric determination of hydroxymethylanthraquinones [in

drugs], B., 1267. See also Heede, A.

Stenstrom, W., and Vigness, I., effect of radiation on oil drops, A., I, 359.
Stenzl, H., and Fichter, F., Tafel's re-

arrangement. III. Structural formula of the hydrocarbon C₁₂H₁₈ obtained by electrochemical reduction of ethyl benzylmethylacctoacetate, A., II, 372.

Steopoe, A., determining the mixing ratio in trass cements, B., 552. Action of aggressive waters on cement and cementtrass mixtures, B., 553. Alteration of badly prepared concrete, B., 554. Effect of agitation on chemical action of aggressive agents [on concrete], B., 1344. Štěpán, K. See Dubský, J. V. Štěpánek, J. See Krauz, C.

Stepanenko, N. S. See Roshkov, V. M. Stepanov, A. V., artificial slip formation in crystals, A., I, 449. Influence of surface state on plasticity of crystals, A., I, 504. Stepanov, B. See Eliashevitsch, M., and Tschulanovski, V. M.

Stepanov, D. V., Liaschtschenko, I. P., and Matveeva, M. S., determination of thickness of layers of electrolytically deposited metals, B., 356.

Stepanov, N. I., Mendeléev's theory of solutions and the metric of the chemical diagram, A., I, 406. Singular points of diagrams of isotherms of reactions, A., I, 568.

Stepanov, S. S. See Borisov, P. P.

Stepanova, A. A. See Kargin, V. A. Stepanova, M. I. See Sumarokov, V. P. Stepantzova, T. G. See Djakova, M. K., and Lozovoi, A. V.

Stepat, W. See Claque, J. A., and Fellers, C. R.

Stephan, (Miss) D. See Iredale, T.

Stephan, F. C., and Telegraph Condenser Co., electrolytes for use in electrolytic condensers, (P.), B., 55. Stephan, H. J. See Diels, O.

Stephan, J., physiology of germination in Serradella, B., 1388.

Stephani, G. See Hessenland, M.

Stephen, R.A., and Barnes, R.J., estimation of grain-sizo [of metals] above 10⁻³ cm., B., 355.

Stephens, C. G., basaltic soils of northern Tasmania, B., 1382. Stephens, D. I. See Dobriner, K.

Stephens, D. J., relation of viscosity of

blood to leucocyte count, with reference to chronic myelogenous leucæmia, A., III, 124.

See also Boyd, E. M., and Hawley, E. E.Stephens, E. S., and Consistometer Corp., testing device for [lubricant] liquids, (P.), B., 1166.

Stephens, R. W. B. See Gregory, H. S. Stephens, W. E., and Bonner, T. W., disintegration of boron by deuterons, A., I, 593.

Stephenson, A. F., correction due to motion of centre of gravity in the Hartree approximation in nuclei, A., I, 278.

Stephenson, A. W., and Lenzart Co., planographic printing plate and process, (P.), B., 502.

Stephenson, C. C., and Giauque, W. F., test of the third law of thermodynamics by means of two crystalline forms of phosphine; heat capacity, heat of vaporisation, vapour pressure, entropy of phosphine, A., I, 175. and

Stephenson, D. See Buttle, G. A. H., and Gray, W. H.

Stephenson, H. P., and Israel, R. G., production of coke or semi-coke by carbonising coal-oil mixtures, (P.), B., 13.

Stephenson, M_{\bullet} , and Gale, E_{\bullet} , F_{\bullet} , adaptability of glucozymase and galactozymase in Bacterium coli, A., III, 396. Factors influencing bacterial deamination. I. Deamination of glycine, dlalanine, and l-glutamic acid by Bacterium coli, A., III, 396.

Stephenson, R. E., and Schuster, C. E., physical properties of soils that affect

plant nutrition, B., 1248.
Stephenson, R. J., X-ray fluorescence yields, A., I, 273.

Stephenson, S. T., K X-ray absorption spectra of some compounds of bromine, rubidium, and strontium, A., I, 2.

Stepin, V. V. See Gerasimov, J. I., and Sirokomski, V. S.

Stepniewski, L. See Bakowski, S.

Stepp, W., synergism and antagonism of vitamins, A., III, 43. Clinical use of pure vitamins, B., 287.

Sterges, A. J. See Fraps, G. S.
Stericker, W. See Cleveland, T. K.
Sterlin, B. See Etinburg, E.

Sterling, J. A., presence of antibody in bile, A., III, 57.

Stern, A., and Deželić, M., optical absorption of porphyrins. XI. and XII., A., I, 442, 597.

and Molvig, H., optical absorption of porphyrins. X., A., I, 165.

and Pruckner, F., optical absorption of imidoporphyrins, A., I, 280. See also Pruckner, F.

Stern, A. C., separation and emission of cinders and fly ash, B., 860.

See also Pincus, S. Stern, D. C. See Smith, F. A.

Stern, E., [adhesive] latex compositions, (P.), B., 67. Cold-swelling starch, (P.), B., 277.

Stern, J. Sce Rollett, A.

Stern, K. See Aszkenazy, C.
Stern, K. G., spectroscopy of catalase,
A., III, 220. Constitution and mode
of action of catalase, A., III, 220. Spectrography of reaction of catalase with ethyl hydrogen peroxide, A., III,

428. and DuBois, D., photo-electric method for recording fast chemical reactions and its application to the study of catalyst-

substrate compounds, A., I, 100. and Hofer, J. W., synthesis of cocarboxylase from vitamin- B_1 , A., III, 354, 439.

and Salomon, K., spectrographic experiments in urease-urea system, A., III, 312. Ovoverdin, a pigment chemically related to visual purple, A., III, 457.

and White, Abraham, constitution of insulin. I. Properties of reduced insulin preparations, A., III, 102. See also White, Abraham.

Stern, O., measurements of the Bohr magneton, A., I, 391...

See also Estermann, I., and Halpern, J. Stern, R. L. See Hercules Powder Co. Stern, S., action of alkalis on invert sugar

solutions, B., 275. Sternau & Co., Inc., S. Sco York, A. F.

Sternbach, L. See Dziewoński, K.:
Sternbach, L. See Dziewoński, K.:
Sternberg, H., fundamentals of microweighing technique, A., I, 428.
See also Friedrich, A.:
Sternberger, H. R. See Hnmmel, F. C.
Sterner, H. frosting of class articles (P.) Sterner, H., frosting of glass articles, (P.), B., 241.

Sterner, J. H., and Medes, G., effect of

sulphur compounds on the coagulation of blood, A., III, 250.

Sterner-Rainer, R., aluminium casting alloys resistant to corrosion, B., 51. Aluminium free-cutting alloys, B., 796.

Sternfeld, E. Seo Kharasch, M. S. Sternfeld, L. Seo Saunders, F.

Sterrett, R. R. See Clark, G. L. Sterrett, I. von, analysis of thermal waters of Szeged, A., I, 51. Indirect volumetric determination of bromate, A., I, 197.

Stetkiewicz, S., antigenic value of purified serum-proteins, A., III, 454.

Stettinius, $K_{\cdot \cdot}$ de-airing in an ordinary pug mill, B., 549.

Steubing, W., and Stolpe, F., phases of splitting and field strength relationships for combined Zeeman and Stark effects of helium lines, A., I, 485.

Steudel, H. See Massatsch, C.

Stevels, J. M., relationship between refraction and b.p. of halogenated derivatives of methane and silicon hydride, A., I, 347. Relation between refraction data and reactivity of halogenated methane derivatives, A., I, 601.

Steven, J. M., [multi-coloured heat] trans-

fers, (P.), B., 471.

Stevens, A. N., assay of monoethanolamine in presence of the ophylline, B., 212.

and Wilson, D. T., assay of theophylline, theophylline monoethanolamine, and theophylline with ethylenediamine, U.S.P., B., 841.
Stevens, C. D., determination of iodine in

biological material, A., III, 448. Source formic acid produced on acid hydrolysis

of nucleic acids, A., II, 470. Stevens, D. R., Gruse, W. A., and Gulf Oil Corp. of Pennsylvania, degumming of gasoline, etc., (P.), B., 1162. Anti-oxidants, (P.), B., 1306.

Payne, C. R., and Gulf Oil Corp., degumming and stabilising hydrocarbon dis-

tillates, (P.), B., 1011.
Stevens, E. H. See Fisher, D. J.
Stevens, F. A., bactericidal and photochemical properties of irradiated codliver oil and an ozonide of olive oil, A., III, 277. Bactericidal and photochemical properties of irradiated petrolatum and mineral oil, A., III, 277.

Stevens, G. W. W., and Norrish, R. G. W., border effects associated with photographic reversal processes, B., 292.

Stevens, H. J. See under Farr-Vulcan Process Co.

Stevens, H. P. See Rubber Producers Res. Assoc.

Stevens, J. B. See Morton, A. A. Stevens, M. F. See Glenny, A. T. Stevens, R. E. See Wells, R. C.

Stevens, T. B. See Marlu Gold Mining

Stevens, T. S., and Hems, B. A., reactions of a-aminoketones, A., II, 343.

Stevenson, A. B. See Callender, A., and Imperial Chem. Industries.

Stevenson, A. C., construction of direct daylight-factor diagrams with allowance for transmission losses of glass, B., 1339.

Stevenson, A. F., spherical symmetry of self-consistent atomic fields, A., I, 215. Generalisation of the equations of the self-consistent field for two-electron configurations, A., I, 441.

Stevenson, J. S., mineralisation and metamorphism at the Eustis mine, Quebec,

A., I, 484.

Stevenson, J. W. See Boyd, E. M.

Stevenson, S. G., and Bacharach, A. L., physical and chemical properties of

casein fat, A., III, 252. Stevenson, W. W., Speight, G. E., Sloman, H. A., Raine, T., and Vickers, J. B., heterogeneity of steel ingots. IV. Determination of oxygen in steel: method for total vacuum-fusion oxygen, B., 1349.

See also Hatfield, W. H., Rooney, T. E., and Swinden, T.

Steward, F. C., salt accumulation by plants, A., III, 407.

See also Prevot, P.

Stewart, A., and Nat. Lead Co., plumbite solutions [for use in oil-refining], (P.), B., 1202.

Stewart, C. P., Chatterji, S. K., and Smith, S., isolation of organic poisons [from viscera, etc.], A., III, 479.

Scarborough, H., and Drumm, P. J., isolation of ascorbic acid from urine, A., III, 417.

See also Drumm, P. J. Stewart, D. See Angus, T. C.

Stewart, D., jun., petrography of some rocks from the South Orkney islands and the Antarctic Archipelago, A., I, 383. Occurrence of detrital authigenic felspar [near Mt. Morris, Michigan], A., I, 587.

Stewart, E. C., and Tygart Valley Glass Co., lehr, (P.), B., 241.

Stewart, E. G., changing influences in [town] gas manufacture, B., 863.

Stewart, G. F., determining sediment in butter and cream, B., 1262.

See also Sharp, P. F. Stewart, G. W., effect of ionic forces shown by the liquid structure of alkali halides and their aqueous solutions, A., I, 116. Effect of chlorine ions on X-ray diffraction in aqueous solution, A., I, 171.

Stewart, H. C. See Frazer, A. C. Stewart, H.L. See Cantarow, A. Stewart, James. See Blakemore, F.Stewart, (Miss) Jessie. See Morgan, (Sir) G. T.

Stewart, J. C. See Officer, R. Stewart, J. E. See Praetorius, E.

Stewart, J. K., and Bewick, H. L., relation of thinners in overlapping varnish coatings, B., 370.

Dorsch, J. B., and Hopper, C. B., solvent balance of a solvent-diluent mixture, B., 1016.

Stewart, J R., relationship of moisture con-

tent to paintability of woods, B., 589.

Stewart, P. A. See Abbot, E. B.

Stewart, R., and Crowther, E. M., analysis

of soils, B., 164.
Stewart, R. F. See Dickinson & Co., J.
Stewart, R. T., Reeves, R. G., and Jones, L. G., spurge nettles, B., 1252.

Stewart, \hat{T} . \check{D} ., Dod, K., and Stenmark, G., ratio of substitution to addition in reaction of chlorine with olefines in dilute carbon tetrachloride solution, A., II, 438.

See also Pierotti, G.

Stewart, V. E., and Pollard, C. B., derivatives of piperazine. XI. Addition to conjugate systems. II., A., II, 520. Stewart, W. L., control of sheep ticks, B.,

826.

Stewart, W. W., construction of glass helices for packing fractionating columns, A., I, 50.

Stewart & Co., Ltd., D. See under Duncan Stewart & Co.

Steyn, D. G., toxicity of poisonous plants in the Union of S. Africa, A., III, 28. Plant poisoning in stock: develop-ment of tolerance, A., III, 28. Detection of strychnine in carcasses and corpses, A., III, 218. Chemical analysis and diagnosis of poisoning in the laboratory, A., III, 427. Safe dose of sulphur for sheep, B., 1406.

See also Rimington, C. Stiashkina, A. See Palladina, O. Stibitz, G. R., energy and lattice spacing in strained solids, A., I, 556. Stickland, L. H. See Kendal, L. P.

Stief, F., economics of detoxification of town's gas, with special regard to carbonisation with coal-gas firing, B., 313. Utilisation and disposal of ammonia liquor from coal-carbonisation plants, B., 745.

Stieglitz, E. J., and Palmer, A. E., blood-nitrite, A., III, 249.

Stieglitz, J. See Guthmann, W. S.

Stiehl, K. See Hahn, G. Stier, T.J. B., and Stannard, J. N., mechanism of carbohydrate dissimilation in

bakers' yeast, A., III, 484.
Stierstadt, O., crystal structure and electric properties. VII. Anisotropy of electrical conductivity in bismuth crystals, A., I, 556.

Stigen, A. L., and De Laval Separator Co., control of ratio between separated constituents in a centrifugal separator, (P.), B., 1288.

Stiles, W., constitution of plant-cell mem-

branes, A., III, 407. Still, A. J. See Shreve, R. N.

Still, A. L., cracking of [petroleum] oil, (P.), B., 323.

Still Ges.m.b.H., C., regenerating washing oil which has been used in production of benzene from coal-distillation gases, (P.), B., 319.

Stille, U. See Cario, G. Stiller, E. T., hydrolysis of azlactones with alcoholic potassium hydroxide, A., II,

See also King, H.

See also King, H.
Stillman, N. P. See Simms, H. S.
Stillman, R. C. See Spielman, L. A.
Stillwell, C. W., crystal chemistry. III.
Structure of binary compounds; AX
compounds. IV. AX₂, A₂X₃, AX₃, AX₄ compounds, A., I, 171.

Stillwell, F. L., occurrence of gersdorffite in N.E. Dundas, Tasmania, A., I, 52.

Stillwell, W. D. See Harshaw, W. J. Stimmel, B. F., and McCullagh, D. R., determination of iodine, A., III, 52. See also Cuyler, W. K., and McCullagh, D. R.

Stimson, H. F. See Osborne, N. F. Stines, D. E. See Standard Oil Development Co.

Stinger, D. See Stearns, G. Stipanits, M., coal dust and rock dust as

constituents of the atmosphere, A., I, 203. Stitt, F., and Yost, D. M., Raman spectra of hquid Si₂Cl₀ and gaseous Si₂H₆, A., I, 167.

See also Coryell, C. D., and Noyes, A. A.Stobiecki, T. See Grünsteidl, E.

Stock, A., chronic mercury and amalgam poisoning, A., III, 351.

Wiberg, E., and Mathing, W., boron hydrides. XXV. Parachor of diborane

B₂H_t, A., I, 93.

Stock, C. C. See Hellerman, L.

Stock, E., resins. XXIV(I). Characteristics of shellacs. XXV(I). British Guiana copals. XXVI. Almeioina gutta resin. XXVII. Recent Congo copal. XXVIII. Resin from Symphonia globulifera, L. XXIX. Acicular shellac. XXX. Yellow and red Demerara copal. XXXI. "Resin" from Acacia Espinhosa Africana, B., 60, 466, 808, 1084, 1237. Preparation of Prussian-blue, B., 260. Ambera historic German varnish raw material, B., 812. Antifouling paints, B., 1238. Water immersion of very old films of rust-proventive oil paints, B., 1371. Oiticica oil. III., B., 1372. Stockelbach, F. E. E., photographic developers, (P.), B., 395.

Stocker, D. E., determination of alkali in wool, B., 1185.

Stocker, H. See Weygand, F.

Stockhausen, F., and Koch, R., vitality of beer yeasts, B., 484. Stockmayer, M. See Dawihl, W.

Stocks, H. B., [machine for] preparation of fibrous materials for spinning, (P.), B.,

Stockton, A. B., actions of diuretic drugs and changes in metabolites in œdematous

patients, A., III, 65.
Stockton, W. V., gas-meter diaphragm research, B., 747.
Stoddard, W. B., jun. See Weisberg, L.,

and Weisberg, Inc., L.

Stodola, F. H., micro-determination of hydroxyl and amino-groups, A., II,

Stoeber, R. See Rhein, M. Stoeckeler, J. H., jack for pulling soil-sampling tubes, B., 1097.

Stoeekhert, K. See Henglein, F. A.

Stöckl, E., effect of X-rays on the anterior pituitary, A., III, 132.

Stöckli, A., micro-manurial tests with Azotobacter, B., 708.
Stölzing, H. E. See Donald, A.

Störmer, C., altitudes and spectra of red and sunlit auroras, A., I, 273. ations of cosmic ray intensity during magnetic storms, A., I, 594.

Stoermer, R., behaviour of electrolytic

oxide layers, A., I, 201. and Starck, H., configuration of diphenyl-

cyclobutanonecarboxylic acids. XXI., A., II, 192.

Starck, H., and Anker, H. E., ring enlargement in truxinic acid series.

XXII., A., II, 192. Stoesser, A. V., effect of acute infection on iodine value of phospholipin fatty

acids, A., III, 419.

McQuarrie, I., and Anderson, John A., effect of various diets, cholesterol, and choline on lipins of the rat's liver, A., III, 18.

Stoesser, S. M. See Dow Chem. Co.

Stoesser, W. C. See Dow Chem. Co. Stogni, N. I., aluminothermic determination of sulphur in iron ores, B., 678. Stohlman, E. F., jun. See Smith, M. I.

Stohlmann, H., a-ray standards, A., I.

Stokes, W. E., Barnette, R. M., and Hester, J. B., effects of summer cover crops on crop yields and on soil. I. Yields of maize and sweet potatoes following summer cover. II. Influence of summer cover on nitrate and organic matter content of a poor grade of Norfolk (U.S.) soil, B., 272.

and Track, L. K., standardisation of egg-white in the A.A.C.C. white-cake formula for testing soft wheat flours,

B., 387.

Stokstad, E. L. R. See Almquist, H. J. Stolberg, M. A., effect of arsenic derivatives on activity of tissue lipase and amylase,

Stolbin, P., simplified determination of proportion of rubber in kok-sagiz for purposes of selection, B., 1377.

Stoldt, W., examination of ice cream, B., 834.

Stolfi, G., biochemistry of scalding and traumatic shock. VII. Ascorbic acid content of adrenal glands, A., III, 172.

Stolfi, G., and Baldanza, C., biochemistry of the anæmias. I. Saponin anæmia and mineral constituents of the blood. III. Tolylenediamine and hæmorrhagic anæmias and mineral constituents of

the blood, A., III, 378. and D'Aroma, G., biochemistry of the anæmias. II. Tolylenediamine anæmia and carbohydrates, A., III, 378.

and Lalli, A., traumatic shock and mineral constituents of the blood, A., III, 389. Biochemistry of the anæmias. IV. Mineral constituents of the blood and phenylhydrazine anæmia. Carbohydrates and hæmorrhagic and phenylhydrazine anæmias, A., III, 459.

Stoliarov, A. I. See Mochnatsch, V. O. Stolk, D. van, and De Lenchère, R. L., folliculin and dihydrofolliculin in urine of pregnant mares, A., III, 437.

Stoll, $K_{\cdot \cdot}$, analysis of nitrogen compounds in sea-water, A., I, 375.

Stoll, M., and Rouvé, A., carbocyclic compounds. XXX. Internal condensation of hexadecane-an- and octadecane-acdialdehyde, A., II, 246.

Stoll, W., sterols. III. Toluenesulphonates of saturated sterols. IV. Sulphonic esters of unsaturated sterols. V. allo-Cholesterol and its detection. VI. Isomerism of the two cholcsteryl ethers, A., II, 147.

Stoll, W. G. See Fierz-David, H. E. Stollé, R., and Heintz, K., 5-anilinotetrazole, A., II, 122. Action of acetaldehyde and benzaldehyde on 5-aminotetrazole, A., II, 308.

Stollenwerk, W., Donnan membrane equilibrium in absorption of nutrients by plants, B., 598.

See also Hager, G.

Stolman, A. See Simms, H. S. Stolpe, F. See Steubing, W. Stolpp, T. See Scheda, B.

Stoltzenberg, H., formation of fogs by contact gasification of organic substances, B., 91.

Stolzmann, Z. See Dombrowski, S. Stomachin, J. B. See Obuchovski, J. M. Stone, H. W., use of chromous sulphate in removal of oxygen from a stream of gas; comparison with other oxygen absorbents, A., I, 94.

Stone, I., insecticidal spray, (P.), B., 172.

Stone, R. S. See Hamilton, J. G.

Stone, R. W., Erb, C., and Werkman, C. H., respiration of propionic acid

bacteria, A., III, 35. and Werkman, C. H., occurrence of phosphoglyceric acid in bacterial dissimilation of glucose, A., III, 396. See also Werkman, C. H., and Wood,

Stone, W., ascorbic acid oxidase and state of ascorbic acid in vegetable tissues, A., III, 188.

See also Fox, F. W. Stone & Co., Ltd., J., Murphy, A. J., and

Wells, S. A. E., aluminium alloys, (P.), B., 252, 1228. Stoner, E. C., magnetic energy and thermo-

dynamics of magnetisation, A., I, 351.

Stoner, G. G. See Brown, J. B. Stoops, W. N. See Douglas, S. D. Stopka, V. See Kallauner, O.

Stoppel, F., detection and determination of addition of fresh to pasteurised milk by the Orla-Jensen method, B., 833.

Storch, H. H., and Fragen, N., recovery of potassium sulphate from syngenite, (P.), B., 542.

and Kassel, L. S., pyrolysis of ethane, A., I, 466.

See also Clarke, L., and Griffin, H. K. Storch, M., finished [metal] castings, B., 1353.

Storck, A. See Maurer, Ed. Storck, G., is an alkaline reaction in soil a cause of heart- and dry-rot in sugar beet? B., 73. Is an alkaline reaction in soil a cause of speck disease in oats? B., 73.

Storfer, E., precipitability of complex trithiocarbamide cuprochloride from its aqueous solution, A., II, 235. Detection of thiocarbamide, A., II, 530. Detection of phthalic acid, B., 647.

Storks, K. H., and Germer, L. H., electron diffraction of long-chain organic compounds, A., I, 172

See also Germer, L. H.

Stormont, R. T. Sec Seevers, M. H.

Storrie, F. R., preparation of 2:4-dinitrobenzonitrile and -benzoic acid, A., II, 498. Story, B. W., and Fuller, E. W., oil com-

position, (P.), B., 413. and Socony-Vacuum Oil Co., colorimeter, (P.), B., 636.

See also Kalichevsky, V. A. Story, Le R. G. See Bennett, H. T.,

and Texas Co.

Story, R. V. See Cholak, J.

Stott, L. L., properties and alloys of beryllium, B., 576. Beryllium-copper for moulds, B., 1356.

Stott, O., [vortical] apparatus for removing solid impurities from water or liquids. (P.), B., 513. Air- or gas-washing apparatus, (P.), B., 742.

Stoft, P. H. See Du Pont de Nemours &

Co., E. I. Stott, V., verification of centrifuge tubes used for determination of visible dirt

in milk, B., 610. Stott, V. H., elastico-viscous properties of a soda-lime-silica glass at temperatures near the "transformation point," B., 1204. Heterogeneity of steel ingots. VII. Pyrometry; production of tubes to be plunged into molten steel at 1650, B., 1349.

Stotz, E., determination of fumaric acid in protein solutions containing succinic acid, A., II, 313.

Harrer, C. J., and King, C. G., "ascorbic

acid oxidase" and copper, A., III, 352.

Harrer, C. J., Schultze, M. O., and
King, C. G., tissue respiration of normal and scorbutic guinea-pig's liver and kidney, A., III, 420.

and Hastings, A. B., components of succinate-fumarate-enzyme system, A., III, 219.

See also Fleming, R.

Stotz, E. H. See Root, H. F. Stotz, H. See Mangold, E.

Stoughton, R. W., and Robbins, B. H., anæsthetic properties of tetrahydrofuran, A., III, 25.

Stout, G. P., inspection of fluids [bottled beverages], (P.), B., 1266.

Stout, H. H., and Samuel, J. M., [ore-] roasting apparatus, (P.), B., 798.

Stout, J. W. See Giauque, W. F.

Stout, L. E., and Baum, A. H., electro-deposition of tin. II. Anode maintenance of an alkaline stannate bath, B., 1358.

Stout, L. E., Feldman, S., and Ellis, J., synthetic resins from mixed phenols, B., 809.

Stover, O. H., Brigham, E. H., and Oleothesin Co., Inc., anæsthetic, (P.), B., 89. Stoves, J. L. See Burton, H., Clark,

C. H. D., and Speakman, J. B. Stow, M. See Langer, T. W.

Stowe, L. R., heat transfer in boiler units, B., 1141.

Stoyanoff, V. A. See Sperry, W. M. Strachan, C., vibrations of a face-centred

cubic lattice, A., I, 224.

Straehan, J., origin of static electricity on surface of solid dielectrics, A., I, 346. Sizing tests on writing paper, B., 227. Automatic control of paper

drying, B., 770. Strachov, N. M., and Osipov, S. S., bituminous series of Uresan River, A., I,

Strachovsky, N., artificial leather, (P.), B., 431.

Strack, E., and Försterling, K., biological action of carnitine and acetylcarnitine, A., III, 424.

and Schwaneberg, H., determination of bases in animal tissues, A., III, 108. Schwaneberg, H., and Wannschaff, G., basic constituents of lampreys, A.,

III, 252.

Strähuber, F. See Wesemann, F.

Straight, H. R., draught control as means of fuel conservation in kiln firing, B.,

Strain, C. V. See Barnes, S. W.

Strain, D. E., and Du Pont Viscoloid Co., depolymerisation of a-substituted acrylic acid esters, (P.), B., 263.

See also Du Pont de Nemours & Co., E. I.

Strain, W. H. See Dobriner, K.

Stranathan, J. D., dielectric constant of isopropyl alcohol vapour, A., I, 601.

Stranathan, R. K. See Granath, L. P., and Rose, J. L.

Strand, H. P. See Walker, H. A. Strandell, B., isolation of the anti-anæmic principle of liver, A., III, 122. Straneo, (Signa.) C. See Gandini, A.

Strang, L. C., Hunter, T. G., and Nash, A. W., application of physico-chemical principles to liquid-liquid contact equipment. V. Mass transfer to liquids in turbulent flow, B., 400. Conditions at liquid-liquid interface, B., 736.

See also Ba Thi, M.

Strangman, L. See Bauer, S. G.

Stranski, I. N., calculation of specific surface and edge and corner energies of small crystals, A., I, 67. Recent knowledge on crystal growth and seed crystal formation, A., I, 447. and Kaischev, R., Thomson-Gibbs

equation for crystals, A., I, 349.

Stransky, E. See Kern, A.

Stransky, H. See Meyer, K.

Straschill, M., analysis of used graphite crucible, B., 860.

Strashesko, D. See Volkov, K.

Strashesko, D. N. See Fomin, S. V. Strassen, H. zur. See Schwiete, H. E.

Strasser, F., solders for thin aluminium plates, (P.), B., 458.

Strasser, J. P., evaluation of starch products used in beater and tub [in papermaking],

Strassmann, F. See Hahn, O., Meitner, L., and Reddemann, H.

Straten, F. W. van, and Ehret, W. F., removal of static charges from glassware, using a high-frequency discharge, A., I, 583.

Stratford, H. R., and Fay, H. B., stabilisation of sheet vulcanised fibre, (P.), B.,

Stratford, R. K. See Standard Oil Development Co.

Stratford, W. M. See Texas Co. Stratschitski, K. I., and Rubin, B. A., biological rôle of vitamin-C in plants. II., A., III, 239.

See also Rubin, B. A.

Straub, F. B., significance of fumario acid for respiration of animal tissues. III. Quantitative investigation of catalysis by fumaric acid; decarboxylation of oxalacetic acid by musele, A., III, 59. See also Annau, E., and Laki, K.

Straub, F. G., reactions of various inorganic and organic salts in preventing scale in steam boilers, B., 1. Cause and prevention of steam-turbine blade deposits, B., 195.

Straub, J. See Malotaux, R. N. M. A.

Straub, W., and Bergmann, F. von, assay of senna leaves, B., 86.

and Triendl, E., peristaltic activity of senna leaves and their active constituents, A., III, 309. See also Clark, A.J.

Straueh, C. B., stabilised foam [for drugs,

etc.], (P.), B., 1274.
Strauchen, A. See Dziewoński, K.
Straumanis, M., theory of difference effect, A., I, 418.

[with Mankoviës, E.], solubility of copper ions in cadmium mercuric thiocyanate, A., I, 456.

and Cirulis, A., complex compounds of mercury and copper halides with aliphatic amines, A., I, 92. Complex compounds of mercury halides with the halides of the aliphatic amines, A., I, 628.

See also Ieviņš, A.

Straus, H. A., magnetic focussing of ion beams, A., I, 488.
Strauss, J., and Demmler, A. W., vanadium

steels for the oil [refinery] industry, B., 1296.

and Vanadium Corp. of America, welding material, (P.), B., 935.

Strauss, L. H., and Scheer, P., influence of nicotine on blood-iodine and -cholesterol, A., III, 179.

Strauss, M. B., thorium nitrate for rapid ashing of serum and urine. I. For subsequent potassium determinations, A., III, 288.

See also Buell, M.V.

Strauss, R., modern textile bleaching, B., 231. Chlorinated rubber for preventing corrosion of light metals, B., 703. Glycol and its derivatives in the paint and varnish industry, B., 810. Use of chlorinated caoutchouc for protective painting of light metals, B., 810. Production, properties, and uses of chlorinated caoutchouc, B., 815.

Strauss, R., production and use of titaniumwhite and titanium pigments, B., 1237. Stream-Line Filter Co., Ltd., and Beacham,

T. E., filters, (P.), B., 4.

Streb, E., and Kemper, H., heat of acetylene-oxygen flame for various rates of flow of the gas mixture, B., 515.

Strebinger, R., and Ortner, G., separation of bismuth from cadmium, A., I, 48.

Streeck, H. See Vollmann, H. Streef, G. M., exchange of sodium, potassium, and calcium between erythrocytes and plasma; content of these elements in blood-plasma and -serum, A., III, 114.

Street, \hat{H} . R., gravimetric determination of small amounts of plasma-lipins, A., III, 3. Street, J. C. See Woodward, R. H., and Young, R. T., jun. Streeter, H. W. See Faber, H. A.

Streichenberger Soc. Anon., furnaces [for burning slack], (P.), B., 858. Streicher, J. S., and Amer. Platinum Works,

pen point, (P.), B., 933. Strelkov, P. G., dependence of thermal

expansion coefficients of silver haloids on temperature, A., I, 354. See also Hachkovsky, W. F.

Strelow, W., development and use of electrodes in arc welding, B., 575.

Streltzov, A., soap stock as bleaching agent in refining fats, B., 364.

Streltzova, A. I. See Katz, S. A. Stremovski, L. I., influence of mud on flotation of phesphorites, B., 1334. Strepkov, S. M., illuminated matt screen

for titration, A., I, 100. Apparatus for hot extraction, A., I, 429. Micro-determination of maltose, A., II, 52. Micro-determination of inulin, A., II, 53. Micro-determination of hexosans, A., II, 136. Determination of glucose by di-chromate, A., II, 229. Dichromate method of determination of reducing sugars, A., II, 324. New disaccharide, labiose, A., II, 325. Differentiation of carbohydrate complexes on microanalysis of plant materials, A., III, 322. Streuli, M., and Bürgin, E., determination of copper in coffee, B., 615.

See also Bürgin, E., and Goldstein, H.

Streuli, P. See Meyer, K. H. Strevens, J. L., Diesel oils from coals and cannels, B., 408. Home-produced Diesel fuels, B., 517. and Mitford, W. B., carbonisation of

mixtures of oil and solid carbonaceous materials, (P.), B., 643.

See also Nat. Coke & Oil Co. Strezynski, G. J., and De Laval Separator Co., reclaiming of oil containing carbon, (P.), B., 211. Refining of mineral oils, (P.), B., 1303.

Stribeck, R., and Bosch Akt.-Ges., R., spark-plug insulator, (P.), B., 1230.

Strickland, A. G., orchard fertiliser requirements, B., 377.

Strickland, C. See Hutton, J. G. Strickler, A. See Parker, V. E. Strickler, H. S., and Seltz, H., thermo-

dynamic study of the lead-bismuth system, A., I, 30.

Stricks, W. See Redlich, O. Striebich, H. See Jander, W.

Stricter, O. G., effect of mineral fillers on serviceability of coating asphalts, B., 699. Strigaleva, N. V. See Moor, V. G.

Striganov, A. R., spectrographic analysis of silumin, B., 451.

Strindberg, R., and Development Associates, gas filter, (P.), B., 996.

String Detector Co. See Fitger, A. K. Stringtellow, W. A. See Neale, S. M. Strishevski, I. I., determination of silver

by means of acetylene, A., I, 262. Determination of copper in cuprous

acetylide, A., I, 376. and Korablev, I. V., detection of traces of sulphur in argon, A., I, 261.

See also Jolson, L. M.

Strobel, E. See Fischer, Hans.

Ströbele, R. See Kuhn, R.
Strømme, L. C. See Hveding, J. A.
Stroganov, N. S., surface tension of solutions of sugars at different liquid interfaces, A., I, 26.

Strogonov, B. See Suchorukov, K.

Strohecker, R., determination of corrosive power (aggressivity) of waters, B., 298. Determination of lime-solvent carbonic acid [in waters] from the values for $p_{\rm H}$ and for bound carbonic acid, B., 849.

Schilling, K., and Budenbender, E., basis of determination of corroding power (aggressivity) of water, B., 505.

Vanbel, R., and Tenner, A., determination of active oxygen, and the analysis of fats, B., 1078.

Stroher Akt.-Ges., F., dyeing medium for live hair, (P.), B., 773.

Strohmeier, G., light yield in the electron impact glow of thallium vapour, A., I,

Strom, D. A., rapid determination of corrosive properties of commercial benzine, B., 641.

Stromberg, H. See Hill, P., and Short, W. F.

Strommer, L. T. See Scharf, J. J.

Strong, E. C., bricks, etc., for roads, buildings, and heat-resisting purposes, (P.), B.,

Strong, F. M. See Elvehjem, C. A.,

and Snell, E. E.
Strong, G. E., modulus of elasticity of glass. I. Effects of temperature change and thermal history, B., 240.

Strong, H. W., hydrogenation, B., 1297. Strong, J., evaporation process and its application to aluminising of large telescope mirrors, B., 240. Decreasing reflexion from non-metallic substances,

B., 546.

Strong, J. G. See Poe, C. F.
Strong, L. C., Gardner, W. U., and Hill,
R. T., production of estrogenic hormone by a transplantable ovarian carcinoma, A., 111, 401.

Strong, R. A., Swartzman, E., and Burrough, E. J., fuel briquetting, B., 743.

Strong, T.H. See Trumble, H.C. Strother, C.O. See Annuller, W. Strouts, C.R.N. See Imperial Chem. Industries.

Struck, H. C., and Szurek, S., metabolism of a dwarf under treatment with growth hormone, A., III, 363.

and Visscher, M. B., effects of prolonged administration of moderate doses of creatine in rats, A., III, 177.

Sec also Bartoli, A. J., and Deutsch, H. Struck, P. See Bunte, K.

Struckmeyer, B. E. See Roberts, R. H. Strugger, S., vital staining of plant cells with neutral-red, A., III, 286.

Strukov, I. T., preparation of tetrahydro-furan, A., II, 428. Plasmocid, B., 839. Strunz, H., composition of pollucite, A., I, 205. Crystal structure and twinning, A., I, 432. Titanite and tilasite (relationship of the silicates to the phosphates

and arsenates), A., I, 432.

Struszyński, M., simple micro-burette, A., I, 267. Micro-determination of density of liquids by the coloured jet method, A., I, 268. Determination of volatile water-insoluble constituents of varnishes and oil paints, B., 590.

Struthers, J. D. See Clarke, B. L., and Ward, R.

Stryzowski, C., stabilised antidote applicable in poisonings with heavy metals, B.,

Stnard, J. A., [entrainment] separator, (P.), B., 308.

Stuart, A. See Boam, J. J.

Stuart, A. H., influence of films on incipient corrosion of iron, B., 944.

Stuart, A. T., storage of energy, (P.), B., 629. Complete gasification of coal with oxygen, B., 1001. Electrolytic hydrogen and oxygen in industrial gas production; complete gasification of coal with oxygen, B., 1200.

Stuart, C. A., Griffin, A. M., Fulton, M., and Anderson, E. G. E., nature of antibodies for sheep-cells in infectious

mononucleosis, A., III, 6. Griffin, A. M., Wheeler, K. M., and Battey, S., thermostable antigen in ox

cells, A., III, 6.
Stuart, F. E., use of powdered activated charcoal in Florida [water purification], B., 848.

Stuart, H. A., valency angle and radius of action of bound atoms, A., I, 446.

Stuart, K. B., and Colorado Fuel & Iron Corp., active carbon, (P.), B., 1158.

Stuart, L. S., saphrophytic digestion of sterilised animal hair and keratoso, B., 950.

Dahle, D., and Frey, R. W., fluorine content of gelatin from calf skins cured with salt and fluorides, B., 818.

Stuart, N., spiriform morphology of some lead crystal growths in silica gel, A., I,

Stuart, N. W. See Greathouse, G. A. Stuart, W. W. See Ostwald, Wolfgang. Stubbe, H., experimental production of [biological] mutations by action of chemicals, A., III, 176. Present position

of radiation-genetics, A., III, 388. Stubbs, J. J. See Moyer, A. J., and Wells,

P. A.Stubbs, J. R. See Elsdon, G. D. Studer, F. J. See Luhr, O.

Studien- & Verwertungsges. m.b.H., synthetic gas, (P.). B., 208.

Studiengesellschaft für Faserveredlung m.b.H., rendering textiles water-repellent, (P.), B., 234.

Studinger, J., short scheme of analyses for detection of poison gases, B., 92.

Stueck, G. H., Flaum, G., and Ralli, E. P., serum-carotene in diabetic patients, A., III, 419.

Stueekelberg, E. C. G., existence of heavy clectrons, A., I, 492. Stückenberg, O. Sco Meyer, W.

Stücklen, (Miss) H. See Carr, (Miss) E. P. Stühler, R. See May, F.

Stürup, G. K., seasonal variations in vitamin-C content of cerebrospinal fluid, A., III, 44.

Stuewer, C. A. See Anderson, E. O. Stuewer, R. See Gen. Foods Corp.

Stuewer, R. F. See McBain, J. W. Stuhrk, A., killing spores of soil bacteria by flowing steam, B., 73.
Stukov, A. P. Sco Nametkin, S. S.

Stulz-Sickles Co. See Payne, B. H.

Stumper, R., modern feed-water treatment, with special reference to high-pressure boilers, B., 987.

Stumpf, G. A., and Bonte, F. R., graphitic steel, B., 1350.

Stumpf, K. E., poptisation of ferric hydroxide in quaternary ammonium bases and behaviour of different ferrio oxide sols towards alkaline solutions of polyhydroxy-compounds, A., I, 181.

Stuntz, M., regulating the work of the [sugar-juice] evaporator, B., 1392.

Stupnikov, S. D., production of sulphuric acid by the Stupnikov three-tower system, B., 901.
Sturdivant, J. H., formula of ummonium

paramolybdate, A., I, 288.

Sturgis, C. C., and Farrar, G. E., jun., hæmoglobin regeneration in chronic hamorrhagic anamia of dogs (Whipple). I. Effect of iron and protein feeding, A.,

Sturgis, M. B., changes in oxidation-reduction equilibrium in soils as related to their physical properties and to growth of rice, B., 72.

Sturken, O., Woodruff, J. C., and Resinox Corp., plastic material from proteins, (P.), B., 945.

Sturm, A., Gietz, K., and Kempte, K., effect on heart and blood-vessels of adrenaline, ophedrine, and related compounds, A., III, 37.

Sturtevant, J. M., heat transfer in calorimetry, A., I, 200. Calculation of secondorder reaction velocity constants, A., I, Calorimetric investigations of organic reactions. I. Inversion sucrose and decomposition of diacetone alcohol, A., I, 534.

Sturtevant, T. J., and Sturtevant Mill Co.,

air separator, (P.), B., 6. Sturtevant Co., B. F. See Ferre, A. W. Sturtevant Mill Co. Seo Sturtevant, T. J.

Stutson, A. C., removal of oil from condensate for use in boilers, B., 508.

Stutz, G. F. A., Myhren, A. J., and New Jersey Zinc Co., zinc sulphide [pigment], (P.), B., 65.

Stutzer, O., marahunitc, a boghead coal in the lignito stage, A., I, 156. Stuurman, J., mechanism of the elaidin-

isation reaction, A., II, 4. Stykan, B. M., mathematical background

of tanning, B., 69.

Style, D. W. G. See Lewis, A.

Styri, H., and SKF Industries, thermal treatment of quenched and hardened steels, (P.), B., 931. Su, C. C. See Liu, S. H.

Suarez, C. V. See Bengolea, A. J., and Raices, A. E.

Suárez Peregrin, E. Seo Moreno Martin,

Subbaramiah, K., and Rao, B. S., physicochemical investigations on varietal differences in rico. I. Sorption and desorption of water vapour by rice grains. II. Protective action of suspensions of rice in water. III. Electrical conductivities of rice suspensions in water, B., 1260. Mechanism of the clarification of muddy water by Strychnos potatorum seeds, B., 1281.

Subbaraya, T. S., Rao, B. N., and Rao, N. A. N., band spectrum of mercurous iodide, A., I, 342. Band spectrum of cadmium iodide, A., I, 342.

Subbarow, Y., Jacobson, B. M., and Prochownick, V., pernicious anæmia principle in liver. III. Isolation and properties of a substance with primary therapeutic activity, A., III, 8.

Subkow, P. See Union Oil Co. of California.

Submarine Signal Co., treatment of liquids, (P.), B., 305.

Subrahmanian, V., determination of ammonia volatilised from soils, B., 819. Volatilisation of ammonia from Indian soils, B., 954. Sewage as a source of nitrogen supply to the soil, B., 956. See also Iyer, C. R. H., Reddi, K. R., and

Sreenivasan, A.
Subramaniam, K. C., diamagnetism of some metallic halides, A., I, 20.

Subramaniam, K. S., and Rao, B. S., utilisation of bagasse, B., 828.

See also Guha, P. C., and Rao, B. S. Subramaniam, T. S. See Birch, H. F., and Robertson, A.

Subramanian, T. V., report of entomological section, 1933—34, B., 603.

Subramanian, V. K. See Guha, P. C. Subramonium, B. R. See Varma, P. S. Succolowsky, O. See Schramek, W.

Sucharda, E., and Mazonski, T., byproducts of Skraup's quinoline synthesis, A., II, 75.

See also Kuczyński, H., and Mazoński,

Suehenko, K. A., spectrum analysis of alloy steels and aluminium alloys, B., 564. Spectral analysis of aluminium alloys for magnesium, copper, titanium, and iron, B., 687.

Suchich, V. A., determination of transparency, coloration, and light dispersion

of celluloid films, B., 1035. and Perelman, T. B., preparation of

colour filters, A., I, 534. and Petin, N. N., photometry by means of a photo-clement, A., I, 266.

Suchorukov, K., and Strogonov, B., activators of peroxidase in diseased plants, A., III, 410.

Suciu, (Mile.) M. See Tanasescu, I. Sud, M. R. See Singh, B. K.

Suda, K., chemical composition of non-manured mulberry leaves, A., III, 81. Sndakov, V. Sec Pavlovitsch, P.

Sudarev, P., and Andreeva, P., carbon monoxide in the [air of] Prokopevsk mines, B., 191.

Sudô, T. See Yoshimura, J.

Sudzilovskaja, M.S. See Rapoport, I.B. Süchting, H., Jessen, W., and Maurmann, G., notable weathered soils of Devonian type in Taunus and Hunsrück, B., 1095. Nutrient conditions in forest [soils]. II. Nutrient intake by and translocation in organs of conifers, B., 1100.

Suéda, H., $p_{\rm H}$ of aqueous cobaltammine complexes and their absorption spectra. III. Aqueous solutions of complexes containing the nitrite radical, A., I, 241. Relation between configuration of metallic complex salts and their ab-

sorption spectra, A., I, 392.

Süe, P., constitution of hydrated alkali niobates, A., I, 41. Niobates, A., I, 428. Suehiro, S., Kobinata, S., Yamaguchi, M., and Ishikawa, H., viscose, LXXI. and LXXII. Spinning experiments with viscose from alkali-cellulose prepared with caustic soda containing sodium sulphide, B., 768.

See also Kita, G. Sneiro, C. de cal, purification of air, (P.),

B., 194. Süllmann, H. See Erlenmeyer, II., and Verzár, F.

Suematsu, S. See Yamaha, G. Snenaga, K. Seo Nitta, I. Suer, W. J. See Fischer, M. H. Sürü, T., elimination of sulphur from gases, B., 515.

Suess, H., reactions in heavy water, A., I, 371.

Pilch, K., and Rudorfer, H., kinetics of the thermal polymerisation styrene in solution, A., I, 416, 523.
Suetsuga, T. See Ishida, Y.
Sueyoshi, Y., determination of phosphatides, A., III, 410.
Sugasawa, S., and Kakemi, K., syntheses

in the papaverine group. IV. Synthesis of 6-propoxy-1-(3':4':5'-trimethoxyphenyl)-7-methoxyisoquinoline, A., II, 527.

Sugawara, S., determination of blood-galactose, A., III, 336. Sugawara, T. See Öshima, K.

Sugden, J. A. See Steatite & Porcelain Products.

Sugden, S. See Barkworth, E. D. P., and Groves, L. G.

Sugi, K., metamorphic rocks of southern

Abukuma plateau, A., I, 434. Sugihara, M., limit of elasticity of an aluminium rod composed of comparatively small crystal grains, B., 1066. Elastic limit of an aluminium rod and size of the crystal grains, B., 1357.

Sugimura, J., mechanism of the phenomena of tachyphylaxis, A., III, 117.

Suginome, H. See Ito, Takeo.

Sugiura, M., ascorbic acid content of Manchuria paprika (Capsicum annuum, L., var. grossum, Sendt.), A., III, 233. Reducing substances in the malt of soya beans produced in Manchuria, A., III,

Sugiyama, G., 3-hydroxy-6-ketoallocholanic acid and synthesis of a-3:6-dillydroxyallocholauic acid, A., II, 420.

Sugiyama, N., enzymes of blood-serum. I. Esterase. II. Amylase content of human serum. III. Esteraso contents in tuberculous patients, A., III, 112, 482.

See also Kawai, Shinichi. 🦿 Suhrmann, R., photo-electric cells and their use in chemical industry, B., 459.

and Barth, G., variation of electrical resistance and reflecting power of metallic mirrors condensed at low temperatures, A., I, 19.

and Berndt, W., photo-electric measurements with metallic antimony, A., I, 444. Non-metallic and random structure of metal films, A., I, 447.

Suida, II., changes in lubricating oil with use, B., 870.

and Pöll, H., examination of petroleum products using fuller's earth, B., 407.

Suito, E., study of enzyme action by thermal analysis of reaction velocity. II. Action of inorganic ferment, A., I, 90.

Sujkowski, Z., polish bentonite from the vicinity of Krzemienice, S.E. Poland, A., I, 382.

Sukatscheva, T. V. See Brown, A. S.Sukegawa, K., vaccine lymph, (P.), B., 499. Suknevitsch, I. F., and Levkin, N. F., action of sodium on anhydrides of certain organic acids, A., II, 319.

Sula, J., cozymase and dihydrocozymase in extracts of animal tissues, A., III, 313.

Sulflo Corporation of America, suspensions for lubrication and other purposes, (P.), B., 645.

Sulfur-Chemie Akt.-Ges., desulphurisation of gases, (P.), B., 344.

Sullivan, B., report of Committee on analysis [of breadmaking materials], B., 386.

Howe, M., and Schmalz, F. D., glutathione in wheat germ, A., III, 82. Explanation of the effect of heat treatment of wheat gorm, B., 1119.

Sullivan, F. W., jun. See Standard Oil Co., and Standard Oil Co. of Indiana. Sullivan, M. X., Sullivan colorimetric test

for guanidine, A., II, 10.

and Hess, W. C., hydrolysis of protein: shortening time for determining cyst-me, A., II, 89. Effect of aldehydes on the determination of cysteine and cystine, A., II, 477. Determination of cystine in urine, A., III, 10.

Howard, H. W., and Hess, W. C., determination of cystine in finger-nail clippings with hydrolysis for one hour,

A., III, 448. See also Hess, W. C.

Sullivan, P. Seo Richardson, J. E. Sullivan, P. H., Atwell, H. V., and Gasoline Products Co., treatment of hydrocarbon oils, (P.), B., 1161.

Sullivan, R. A. See Romanoff, A. L. Sullivan, R. R., first spark spectrum of cæsium as excited by electron impact, A., I, 158.

Sullivan, V. R. See Smith, G. Frederick. Sullivan, W. N., evaluation of somi-concentrate fly sprays, B., 1281.

See also Le Pelley, R. H.
Sullivan Machinery Co., apparatus for reducing or crushing materials, (P.), B., 992.

Sully, A. H. See Owen, E. A. Sulman, F. See Zondek, B.

Suloev, A. I., and Ponomarev, A. L., Chaidarkan mercury-antimony-fluorite deposit, A., I, 433. Sulowski, S. See Broniewski, W.

Sulzberger, M. B., and Simon, F. A., arsphenamine hypersensitiveness in guineapigs. III. Regional geographic variability in suscoptibility; chemical specificity of hypersensitivity; variation in sensitising proclivities of different brands, A., III, 137.

Sumarokov, V. P., converting liquid distillates obtained in dry distillation of wood by the Bruester-Badger method in the Asha wood-chemistry plant. I., B., 866.

and Stepanova, M. E., recovery of crystalline polyhydrie phenols from extractional wood tar, B., 1155.

and Ugriumov, V. D., preparation of pyrocathechol and other polyhydric alcohols from wood-creosote fractions by demethylation of their esters, B., 647. Separation of wood creosote into its constituents, B., 866.

Sumi, M., 2-naphthoates and anthraquinone-2-carboxylates of vitamin-D and

other sterols, A., II, 60.

Sumita, E., Kawabata, A., and Fujioka, Y., effect of kelp-meal feed on the iodine content of hens' eggs, B., 973.

Sumiya, S. See Ochi, S. Summ, N. I. See Krestinski, V. N. Summerford, S. D. See Sheets, O.

Summers, R. E., and Summers, W. H., design and manipulation of the Lunge

nitrometer, A., I, 100. Summers, W. H. See Summers, R. E. Summerson, W. H. See Goudsmit, A.

Summerson & Sons, Ltd., and Ticehurst, A. G., sifting or screening apparatus, (P.), B., 303.

Sumner, F. B., and Doudoroff, P., quantitative relations between visual stimuli and the production or destruction of melanin in fishes, A., III, 252. and Wells, N. A., relations between

respiratory metabolism in fishes and susceptibility to certain anæsthetics and lethal agents, A., III, 420.

Sumner, J. B., urease, A., III, 354.

and Dounce, A. L., does trypsin inactivate urease? A., III, 140. Crystallino catalase, A., III, 268.

and Howell, S. F., non-identity of jackbean agglutinin with crystalline ureaso, A., III, 6. Identification of the hæmagglutinin of the jack bean with concanavalin-A, A., III, 197.

Sumuleanu, C., and Botezatu, M., direct micro-titration of boric acid in mineral waters, A., I, 45. Micro-colorimetric determination of sodium in mineral

waters, A., I, 46.

Botezatu, M., and Nicolau, T., microtitration of free sulphurous acid, applicable to wines, B., 830.

and Chimicescu, G., colorimetrie microdetermination of chlorides, sulphates, and phosphates in wines, B., 830.

Sun, C. C. See Hsieh, C. Y.

Sun, C. E., ionic potential and basic and acidic properties of hydroxides, A., I,

and Liu, C., dipole moment of 2:4-dichlorophenol, A., I, 347.

and Sze, C. H., addition of hydrogen fluoride to ethylene, A., II, 132. See also Chen, C. Y., Tseng, C. L., and

Yao, C.-H. Sun, C. P. See Woo, Y. H.

Sun, C. S. See Chow, R.

Sun, H. H. See Rhodes, F. H.
Sun Oil Co. See Banks, D. B., Chatfield,
V. M., Musante, A. F. S., Pew, A. E.,
jun., Stearns, W. V., Terrell, H. T., and Vose, R. S.

Sunaba, Y., changes in blood-sugar and glycogen content of liver and muscle after administration of monosaccharides, A., III, 19. Effect of insulin on bloodsugar and glycogen content of liver and muscle, A., III, 19. Change in bloodsugar and glycogen content of liver and muscle after administration of disaccharides, A., III, 19.

Sunawala, S. D., determination of formic acid in commercial acetate of lime, B., 20.

See also Kothavalla, Z. R. Sundararajan, A. R. See Ranganathan, S. Sundberg, T., Reichert-Meissl, Polenske, and A and B values of [edible] fats, B., 1078.

Sunderman, F. W., and Razek, J., spectrophotometric studies of colour development in analysis of sugar by the Benedict method and of cholesterol by the Leibermann-Burchard reaction, A., II, 313.

Sundhoff, D. See Schumacher, H. J. Sundstedt, N. J., wood investigations, B.,

534, 655. Sundstrom, C., Hayes, J. W., and Solvay Process Co., purification of calcium chloride brines, (P.), B., 542.

Suneson, G. A., and Peltier, G. L., effect of defoliation on the cold-resistance of

winter wheat, B., 1251.
Sung, C., and Chn, F. T., vitamin-C content of foods available for young infants, A., III, 189.

See also Chu, F. T.

Sung, T. T. See Tang, T. H. Suolahti, O. See Virtanen, A. I.

Superheater Co., Ltd., and Comp. des Surchauffeurs (Soc. Anon.), tubular heat-exchange elements and method of joining tubes comprised therein, (P.), B., 991.

and Wood, J. E., purification of steam in steam-generating and -superheating installations, (P.), B., 97.

Superior Steel Corporation. See Kientz, J. C., jun.

Supińska, J., and Pijanowski, E., chemical and bacteriological analysis of "Huslanka," B., 1259.

See also Pijanowski, E.

Supplee, G. C., Ansbacher, S., Flanigan, G. E., and Hanford, Z. M., determination of lactoflavin by fluorescence measurements, A., III, 377.

See also Ansbacher, S., and Bender, R. C. Supplee, W. C., vitamin-D content of menhaden fish oil, B., 586.

Surak, J. G. See Orthmann, A. C.Surdin, M., liquid state. II., A., I, 506. See also Bauer, E.

Sure, B., and Buchanan, K. S., avitaminosis. XVII. Influence of highfat diets on vitamin- B_1 requirements, A., III, 77. Vitamin-B₁ and thyroxine, A., III, 77. [Effect of] deficiency of vitamin-A and -B complex on concentration of blood and tissue enzymes of the albino rat, A., III, 103. Antithyrogenio action of crystalline vitamin-B, A., III, 493. Influence of hyperthyroidism on vitamin-A re-

serves of the albino rat, A., III, 493. Kik, M. C., and Buchanan, K. S., enzymic efficiency in avitaminosis, A., III, 76. Effect of vitamin-D deficiency on concentration of blood- and tissueenzymes of the albino rat. V., A., III, 105.

Surface, Combustion Corporation, furnaces, (P.), B., 1150*.

See also De Coriolis, E. G., Hepburn, W. M., and Winder, F. J.

Surie, E., biological assay of vitamin-A in diet of Indians, A., III, 324.

Surkov, E. I. See Kuzminich, I. N. Surls, M. F., and Sefing, F. G., properties of grey iron castings as affected by superheating temperatures, B., 1348.

Surmatis, J. D., and Willard, M. L., microscopic tests for amino-acids, A., II, 314. Surmiński, A. See Kuczyński, H. Surovtzev, V. V., and Rasorenov, A. S.,

ash from powdered brown coal as a raw material for production of cement, B., 784.

Surugue, J., β - and γ -radiations of members of the actinium family, A., I, 275. Suschkevitsch, T. See Siskin, M.

Susin, V. See Steinberg, S. S.

Sustmann, H., and Lehnert, R., mineral constituents of coal and their removal, B., 1291.

Susz, B., Fried, S., and Briner, E., Raman spectra of some substituted triphenols and of tannin, A., I, 63.

Pfau, A. S., and Plattner, P. A., volatile vegetable materials. VI. Absorption spectra of azulene, gnaiazulene, and vetivazulene, A., I, 281.

See also Briner, E.

Suszko, J., and Szelag, F., steric changes in optically active carbinols. I. Complete conversion of quinidine into epiquinidine, A., II, 217.

Suszko, J., and Szych, B., condensation of naphthalyl chloride with acetoacetic ester, A., II, 250.

and Trzebniak, F., 1:3-diamino-1:2:2trimethylcyclopentane, A., II, 237.

and Wdowicki, M., naphthalylmalonic and peri-naphthindandionecarboxylic esters, A., II, 194.

and Wojciński, L., transformations of phthalylmalonic ester, A., II, 21. See also Ludwiczak, (Mlle.) R.

Sutcliffe, E. B., recovery of condensible vapours, etc., from active carbon or other solid adsorbents, (P.), B., 198.

Suter, A. F., shellac, B., 368.

Suter, M., potassium palmitate test for hardness [of water], B., 1139.
Sutherland, B. P. See Morris, D. D.
Sutherland, C. L., Meiklejohn, A., and Price, F. N. R., health hazard of a group

of workers exposed to alumina dust, A., III. 426.

Sutherland, D. M., jun., fibre products, (P.), B., 129. Design and refining action of discs [for treatment of paper pulp], B., 426.

Sutherland, G. B. B. M., carbon-halogen distance in the methyl halides, A., 1, 500. and Konn, G. K. T., infra-red spectrum of tetradeuterethylene, A., I, 598.

and Penney, W. G., assignment of fundamental vibration frequencies in O3, F₂O, Cl₂O, NO, and N₃, A., I, 15.

See also Penney, W. G. Sutherland, R., factors relating to control of soft scald in Jonathan apples, B., 603.

Sutherland, R. O. See Sherman, A.

Sutliff, W. D. See Felton, L. D. Sutra, R., formation of acetone [isopropylidene] derivatives of mercaptals, A., II,

Sutschkov, V. N., calculation of working conditions of Gay Lussac towers, B., 900. See also Usiukin, I. P.

Sutter, P. See Fichter, F. Sutton, C. R., effect of alkyd resins on solvent requirements of nitrocellulose lacquers, B., 63.

Sutton, H., and Le Broeq, L. E., impregnation of metallic objects with a filling or scaling composition, (P.), B., 359.

Sec Frank, F. C., and Sutton, L. E. Gregg, A. H.

Sutton, R. C., alkaline detergent powder, (P.), B., 542.

Sutton, R. M., mercury manometer with high multiplication factor for differential pressure measurements, A., I, 537.

Sutton, S. D. See Veedip, Ltd.
Sutton, W. L., aluminium alloys versus

stainless steels for aircraft, B., 926.
Sutton, W. R., and Nelson, V. E., zine [and growth of rats], A., III, 308. Suzuki, H. See Kondo, H.

Suzuki, Kakuwo, decomposition of glucose in solution containing an excess of calcium hydroxide, B., 827. Influence of starch or sucrose on decomposition of glucose in solution containing an excess of calcium hydroxide at 80°, B., 827.

Suzuki, Koji, synthesis of resoreylbutyrolactone mono- and di-methyl ethers, A., II., 62. Pinene peroxide, A., II, 67.

Suzuki, Kozo, alcoholic fermentation of cane juice, B., 1395.
 and Kenjo, M., water-culture experi-

ments with [sugar] cane: potassium deficiency, B., 709. Sodium cobaltinitrite method for determining potassium in cane juices, B., 716.

Suzuki, Kozo, and Tanabe, Toshiichi, use of chlorine for clarification of cane juice in manufacture of plantation white sugar. B., 483.

Suzuki, M., treatment of carbonaceous electrode elements, (P.), B., 643.

Suzuki, Saburo, direct determination of oxalic acid in blood, A., III, 54.

Suzuki, Shinichi. See Kondo, S.

Svec. F., destruction of digitalis substances by gastric juice. I., A., III, 297.

Svedberg, T., ultra-centrifuge and study of high-molecular compounds, A., I, 480. Svendsen, S. S., and Burgess Titanium Co., purification of titanium compounds, (P.), B., 779. Treatment of titaniumbearing minerals, (P.), B., 779. Titanium compounds, (P.), B., 779. and Clay Reduction Co., alums, (P.), B.,

134. Granular aluminium hydroxide,

(P.), B., 668. Svensson, C. J., composition for covering floors, walls, and similar surfaces, (P.), B., 577.

Svensson, E., biological determination of vitamin-A and its pro-vitamin in milk of Nordic women, in dog-rose fruits, and in black currants, A., III, 43.

Svensson, G. See Scheele, C. von.
Sventitzki, N. S., interrupted arc for spectral analysis, A., II, 479.

Sverdlin, A. See Godney, I. N.

Sverdlin, M., preparation of cellulose acetate. II., B., 1033.

Sverige, G., rôle of cadmium and chromium salts as pigments, B., 1086. Preparation of Iithopones, B., 1371. Metallic pigments, B., 1371.

Sveschnikov, A. T., tap-grease for ground-glass surfaces, A., I, 267.

and Smirnova, E. V., determination of sulphur in solid fuels by Eschka's method, without oxidation of filtrate, B., 404. Determination of small amounts of arsenic in iron and steel, B., 448.

Sveschnikov, B. J., emitted fluorescence and coefficient of absorption of dye solutions in the region of small concentrations, A., I, 11. Dependence of the rate of photochemical reactions in solution on concentration of reagents, A., I, 419.

Svetlov, J. M., and Vulfson, N. S., preparation of sec.-octyl alcohol and sebacic

acid, A., II, 3. Svirbely, J. L., vitamin-C studies in the rat and guinea-pig, A., III, 77. Effect of diet and various substances on the vitamin-C content of some organs of the rat, A., III, 188.

and Kendall, E. C., vitamin-C and the adrenal cortical hormone, A., III, 184. Svoboda, H., f.-p. depression and chloridelactose number of milk, B., 722.

Swab, C. M., ocular lesions resulting from thallium acetate poisoning, A., III, 29.

Swadesh, S. See Mirsky, I. A.

Swainson, S. J. See Barsky, G. Swallen, L. C., and Commercial Solvents Corp., separation of [di- and tri-]methyl-

amines, (P.), B., 650. Swallow, H. T. S., effect of alkalis on refractories, with particular reference to gas and coking industries, B., 139. Apparatus for determination of the porosity of firebricks by gas expansion, B., 1341.

Swaminathan, M., relative value of proteins of certain food stuffs in nutrition, B., 1127.

See also Ranganathan, S.

Swamy, S. R., and Iyengar, K. Y. S., X-ray analysis of the structure of fibrous tourmaline, A., I, 484.

Swan, A., and Carter, B. C., filtration of liquids, (P.), B., 401. Swan, D. R. See Lockwood, J. E.

Swan, G. See Campbell, W. G.

Swan, H., Higgins, S., and Bakelite Corp., printing plates, (P.), B., 469.

Swan, J. C., apparatus for processing [natural] gas, (P.), B., 19.

Swan, J. H., and Gardner-Richardson Co., [paper-]coating composition, (P.), B., 29.

[Greaseproof] paper, (P.), B., 537. Swank, H. W. [with Mellon, M. G.], determination of iron with 7-iodo-8hydroxyquinoline-5-sulphonic acid, A., I,

Swann, G. See Read, J.

Swann, H. G., effect of diet on survival of adrenalectomised rats, A., III, 381. Swann, S., jun., and Field, E. W., electro-

lytic reduction of n-valeraldehyde to

n-pentane, A., II, 443. Swann, W. F. G., numerically consistent corpuscular theory of cosmic rays, A., 1, 109. Electrodynamic force equation in its bearing on evidence for existence of a new cosmic-ray particle, A., I, 594.

Locher, G. L., and Danforth, W. E., Geiger-Müller counter measurements of cosmic-ray intensities in the stratosphere, A., I, 213.

Swann, W. K., jun. See McChesney, E. W. Swann Fertilizer Co. See Klugh, B. G.

Swann Research, Inc. See Ballard, J. L., Booth, C. F., Durgin, C. B., Jenkins, R. L., McCullough, C. R., Moose, J. E.,

Moss, H. V., and Udy, M. J. Swanson, C. O., report of 1935—36 Committee on experimental baking test, B., 386. Factors which influence results in wheat-meal time-fermentation test, B., 832. Factors influencing the protein content of wheat, B., 1397. Varietal factors influencing the milling baking qualities of wheat, B., 1397.

Swanson, E. E., N-alkylbarbituric acid derivatives, A., III, 25.

and Fry, W. E., [pharmacology of] 2-methylallyl derivatives of barbituric acid, A., III, 266.

Swanson, H. R. See Ridgway, C. M. Swanson, T. B. See Berry, P. A.

Swanson, W. H., analysis of sulphite acidmaking process [for wood pulp], B., 1188.

Swarbrick, T., effect of spraying methods on cost of applying fruit-tree washes, B., 1106.

Sward, G. G., painting over asphalt, B.,

See also Gardner, H. A.

Swart, J. C., influence of quantity of feed on growth and properties of wool, B., 1404. Influence of sulphur in ration on growth and properties of wool, B., Ĭ404.

Swartwood, K. See Universal Oil Products

Swartwout, H. G., spray injury [of fruit], B., 603.

Swartz, C. E., and Amer. Smelting & Refining Co., coating of ferrous metals with cadmium, (P.), B., 933. Flux for cadmium and its alloys and regeneration thereof, (P.), B., 933. See also Phillips, A.J.

Swartz, M. D., polish, (P.), B., 1368.

Swartzlow, C. R., and Keller, W. D., coralloidal opal, A., I, 270.

Swartzman, E. See Strong, R. A.

Swedenborg, H., and Claesson, M., fine structure of the K absorption edges of copper at low temperatures, A., I, 105.

Swedin, B., mechanism of the aggregation of erythrocytes, A., II, 1.

Sweek, W. O., Benroth, J. S., and Saunders, J. A., preparation of palatable beverages containing alcohol, B., 279.

Sweeney, E. L., blast-furnace slag for dry-

box purification [of town's gas], B.,

Sweeney, O. R., Vilbrandt, F. C., Beeson, H. H., Montgomery, H. A., and Hanlon-Buchanan, Inc., separation of products obtained in the oxidation of hydro-

carbons, (P.), B., 16.

Sweeney, W. T. See Volland, R. H.

Sweet, A. J. See Nat. Aniline & Chem. Co.

Sweet, S. S. See Eastman Kodak Co.

Swenson, T. L. See Balls, A. K. Swiatkowska, W. See Chrzaszcz, T., and

Sym, E.A.

Swiderski, J., syntheses of $\alpha\beta$ -dicinnamoylethano and its pp'-dimethoxy-derivative,

Swientoslawski, W., calorimetric study of slow reactions, A., I, 478. Purification and determination of degree of purity of liquids, A., I, 481. Preparation of extremely pure liquids, A., II, 80. Flow calorimeter for determining heat of setting of cement, B., 554. Characterisation of gas coals on the basis of agglutination index curves of binary mixtures, B., 637.

and Hantke, G., agglutinating power of coal or pitch in binary and ternary mixtures containing other coals or neutral diluents, B., 637.

and Piezczek, S., measurement of critical temperatures of individual liquids and

mixtures, A., I, 377. and Pomorski, J., thermoregulators and thermostats for measurements of prolonged heat effects, A., I, 478. Apparatus for automatic registration of prolonged heat effects, A., I, 478.

and Ramotowski, E., influence of expansion of vapours on efficiency of distillation, A., I, 481.

Swietoslawska, J., fluorescence bands of cadmium vapour, A., I, 385.

Swift, C. E. See Lemon, J. M., and Union Oil Co. of California.

Swift, E., jun. See Bent, H. E. Swift, E. H. See Dodson, R. W. Swift, F. R., and Standard Brands, souring material [for rye bread], (P.), B., 1266.

Swift, H. B. See Equipment & Eng. Co. Swift, L. L. See Winder, F. J.

Swift, W., and Whiddington, R., double excitation losses in helium, A., I, 207.

Swift & Co. Fertilizer Works. See Siems, H. B.

Swinden, T., heterogeneity of steel ingots. II. Rimming steel; composition variation from outside to centre, B., 1349. and Stevenson, W. W., relative efficiency

of restrainers in pickling of carbon steels, B., 567. Heterogeneity of steel ingots. V. Gases in iron and steel and their effect on the solidification of ingots, B., 1349.

See also Hatfield, W. H., and United Steel Cos.

Swingle, H. S., physiology of insects in relation to control, B., 602.

Swingle, W. W., Parkins, W. M., and Taylor, A. R., intaot and adrenal-ectomised dogs subjected to sodium and chloride depletion by intraperitoneal injections of glucose, A., III, 184

Parkins, W. M., Taylor, A. R., and Hays, H. W., relation of serum-sodium and -chloride levels to alterations of bodywater in the intact and adrenalectomiscd dog, and effect of adrenal cortical hormone on fluid distribution, A., III, 184

See also Parkins, W. M.

Swinney, R. H. See Hafner, P. G. Swirles, (Miss) B., relativistic interaction of two electrons in the self-consistent field method, A., I, 163.

See also Hartree, D. R. Swope, H. G., and Hess, R. H., removal of fluorides from natural waters by "defluorite," B., 625.

Swyngedauw, J., electrochemical preparation of isoelectric gelatin; deviations in the isoelectric point of commercial gelatin, A., I, 616. Quantitative study of electrofiltration of gelatin gels as a function of the $p_{\rm H}$, A., I, 616. Electrometric determination of $p_{\rm H}$ of gelatingels with the quinhydrone electrode, A., I., 616. Checking isoelectric state of gelatin gels by electrofiltration, A., I. 616.

Sydnes, O. See Kraft-Ström, H.

Syed, I. Z., and Wheeler, T. S., synthesis 4':5-dihydroxyflavone, A., II, 29.

Sykes, C., Evans, H., and Metropolitan-Vickers Electrical Co., metal-coated [glass] surfaces, (P.), B., 1207.

and Jones, F. W., atomic rearrangement process in alloy CuaAu, A., I, 74. Examination of thermal effects due to order-disorder transformations [in alloys], A., I, 74.

Needham, W., Jones, F. W., and Metropolitan-Vickers Electrical Co., electric heating elements, (P.), B.,

361.

and Wilkinson, H., transformation in the

β-brasses, A., I, 608. See also Bragg, W. L., and Jones, F. W.

Sykes, E. T. See Findlay, D. H. Sykes, J. F., diffusible and non-diffusible calcium of blood following overdosage with parathyroid hormone or irradiated ergosterol, A., III, 54. Sec also Taylor, N. B.

Sykes, R. F. R., application of 8-hydroxyquinoline to the Berzelius method of alkali determination in soda-lime-silica

glasses, B., 138.

Sykes, W. P., Van Horn, K. R., and
Tucker, C. M., molybdenum-carbon system, A., I, 23.

Sylvan, S. G., and Amer. Air Filter Co., rotary dust separator, (P.), B., 634.

Sylvania Industrial Corporation. See

Joseph, C., and Wickmann, P. A.

Sylvester, N. D., and Hughes, E. B.,
determination of zinc in foods, B., 82.

See also Lampitt, L. H.

Sym, E. A., influence of nature of organic solvent on activity of esterase, A., III, 311.

and Swiatkowska, W., enzymic ester syntheses, A., III, 269.

Symons, G. E., modification of chlorine demand test and the o-tolidine test for residual chlorine in sewage, B., 1413.

Synephias, S., relative participation of proteins and fats in covering energy during inanition, A., III, 381.

See also Terroine, E. F. Synge, R. L. M. See Bell, D. J.

Synthetic Products, Inc. See Mnookin, N, M.

Syônô, S. See Kafuku, K.

Syrkin, J. K., kinetics of bimolecular reactions in solution, A., 1, 313.

See also Selivanova, A. S., and Wolkenstein, M.

Syrocki, A. V., Fuller, J. E., and France, R. L., acid production by the Escherichia-Aërobacter group of bacteria as indicated by dissolved metallic iron, A., III, 317.

Syrocki, B. J. See Rubin, M. A. Szablics, E. See Koranyi, A.

Szabó, A., cleaning of leather and cleaning and brightening compound therefor; compound and apparatus for cleaning leather, (P.), B., 69. Szabo, J., and Rakcsányi, L., proportions

of glucose and fructose in grapes, must,

and wines, B., 967.

Száhlender, K., Hungarian Ricinus cultivation. I. Micro-oil press and microdetermination of acid value. II. Comparison of ripeness, oil content, and acid value of the oil from Ricinus seeds from one plant, B., 257, 696.

Szakáll, A., deamination and specific

dynamic action, A., III, 302. Szalay, A. See Chang, W. Y.

Szankowski, W., determination of clotting time of blood and plasma, A., III,

See also Parnas, J. K.

Szanyi, I., vitamin-C content of paprika fruit, B., 836.

Szasz, G., silver halide emulsions for production of direct positives, (P.), B., 731. Preparation of wash-out relief printing

matrices, (P.), B., 1277.

Szathmáry, J. See Belák, S. Szczekocki, H. See Krause, A. Szezeniowski, B. See Stefanowski, B. Szczpinski, A. See Schmidt, E. G.

Sze, C. H. See Sun, C. E., and Tseng, C. L. Sze, S. Y., effect of thermal agitation on reflexion of X-rays by crystals, A., I, 171.

Szebellédy, L., and Ajtai, M., volumetric micro-determination of nitrates, A., I, 631.

and Jónás, J., detection of potassium with racemic acid, A., I, 45. Detection of molybdie acid by fluorescence reaction, A., I, 633.

and Madis, W., manganese as a catalyst for determination of hydrogen peroxide with potassium bromate, A., I, 529. Osmic acid as redox indicator in volumetric determination of arsenite with potassium bromate, A., I, 530.

and Sik, K., apomorphine as redox indicator in determination of antimonite ion with potassium bromate,

A., I, 200.

and Tanay, S., detection of boric acid with alizarin, A., I, 45. Microdetermination of acid value of castor oil, B., 153.

Szécsényi-Nagy, L. See Verzár, F. Szegedy, E., halogenometric determination of fumaric acid, A., II, 273. Halogenometric determination of fumaric acid in presence of those accompanying

compounds common in biochemistry, A., II, 367.

Szego, E., purification of press-water from sugar-beet pulp, B., 960. Regulation of draw-off in [sugar-beet] diffusion batterics, B., 960.

Szegő, L., and De Ponte, G., industrial preparation of higher alkylsulphonates,

B., 415.

and Malatesta. L., constitution and chemical-colloidal properties of the higher fatty acids, A., I, 238.

Szejnman-Rozenberg, A., assimilation of iron in course of embryonic development of chicken, A., III, 213.

Széki, J., and Romwalter, A., utilisation of aqueous liquor from low-temperature carbonisation [of coal], B., 745.

Szelag, F. See Suszko, J. Szeliga, A. See Krause, A.

Szelinski, B. See Diemair, W. Szélyes, L. See Gróh, J.

Szendi, B., intra-uterine carbohydrate

metabolism, A., III, 301. Szenes, T. See Korányi, A.

Szent-Györgyi, A., significance of fumaric acid for respiration of animal tissues. III. Introduction, review, methods, A., III, 59. Oxidase systems of peroxidase plants, A., III, 232.

See also Banga, I., Bentsath, A., Bruck-

ner, V., and Laki, K. Szepesi, Z. See Bay, Z.

Szigeti, B. See Halban, H. von.

Szilard, L. See Griffiths, J. H. E.

Szilvay, K., storago of inflammable or oxplosive liquids, (P.), B., 322.

Szilvinyi, A. von, propagation of moulds, A., ĬIÍ, 315.

Szinger, E., and Weil, L., determination of particle size of powdered materials, B., 852. [Accuracy of Andreasen's sedimentation pipette], B., 1285.

Szirak, Z., German specification tests [for insulating materials free from rubber],

(P.), B., 149.

Szlatinay, L. See Schulek, E. Szmyt, M. See Hrynakowski, K. Szmytówna. See under Szmyt.

Szniolis, A. See Just, J.

Szold, E., fine structure of phosphate urinary stones, A., III, 10. Structure of cystine calculi, A., III, 417.

Szolloesi, E. See Régnier, J.

Szonntag, E., examination of silage, B., 977. Szper, J. See Centnerszwer, M.

Szüsz, F., potassium metabolism in normal and toxemic pregnancy, A., III, 206. Szulc, B. See Hrynakowski, K.

Szurek, S. See Evans, E. I., and Struck, H, C

Szych, B. See Suszko, J.

Szymanowitz, R., and Porter, B. H., colloidal graphite and its rôle in the ceramic industry, B., 1048.

T.R.C. Corporation. See Plauson, H., and Sommer, A.

Tabata, K., and Moriya, T., thermal endurance of glass, B., 137. See also Moriya, T.

Tabor, F. S. See Guerrant, N. B.

Taboury, M.-F., and Bellot, M., action of light on the Liesegang phenomenon, A., I, 461.

See also Grumbach, A. Tacconi, S., treatment of roads with sodium silicate, B., 915.

Tachi, I., electrolytic reduction potentials of organic compounds. XIII. Reduction potentials of dimethylaminoazo-benzene. XXIV. XXV. Standard electrolytic reduction potential and redox potential, A., I, 415, 567.

and Kabai, H., electrolytic reduction potentials of organic compounds. XXIII. Reduction potential of quin-

oline, A., I, 619. See also Shikata, M.

Tachibana, K., influence of aminoacetopyrocathechol on blood-sugar picture and on glycogen content of liver and muscle, A., III, 24. Action of posterior pituitary preparations on blood pressure and on smooth muscle organs, A., III, 39. Taconis, K. W. See Keesom, W. H. Tada, S. See Sakaguchi, K. Taebel, W. A. See Hopkins, B. S.

Taegener, W., specific heats of sugar solutions, B., 175.

Täufel, K., chemical causes of deterioration of food fats, B., 388. Chemistry of fats in fight against food spoilage, B.,

Thaler, H., and Schreyegg, H., fat of mould Citromyces sp., A., III, 182. Fat of yeast (Saccharomyces sp.), B., 584.

See also Bleyer, B.

Tafel, M. C. See Tafel, T., jun. Tafel, T., jun., and Tafel, M. C., increasing carbon content of iron, (P.), B., 53.

Tafel, V., decomposition of calcium sulphate in sinter-roasting of lead ores, B., 572.

and Lampe, G., extraction of nickel from the Frankenstein nickel ores, B., 1220. Rendering water-soluble the nickel content of German nickel ores and minerals, B., 1353.

Taft, R. B., radioactivity of thorium

dioxide sol, A., III. 307.

Taggart, A. F., Del Giudice, G. R. M., and Ziehl, O. A., chemical theory of flotation, B., 49.

Taggart, M. S., and Richter, G. H., sapogenin of Gypsophila, A., II, 427.

Tagliani, G., protection of vegetable fibres from damage during bleaching, B., 1038. Taguchi, Y., "Kawasaki Hakkinko"—a stoel with extremo resistance to heat

and acid, B., 921. Tahl, T. See Schiff, L.

Tai, H. C. See Chien, S. L. Tai, L. C. See Bates, L. F.

Tainter, E. G. See Field, J., jun.

Tait, T. See Birch, S. F.

Tait, W. H., instrument for measuring thickness of coatings on metals, B., 1359.

See also Macnaughtan, D. J.

Takács, L., influence of pineal body on growth, A., III, 152.

Takagi, J. See Wada, I.
Takagi, K., ratio of different phosphorus compounds in the blood and tissues during growth of rabbits, A., III, 292. See also Hotta, K.

Takagi, M., effect of temperature on discontinuous process of magnetisation in nickel and nickel-iron alloy (40% Ni), A., I, 449.

See also Okubo, J. Takagi, S. Sco Asahina, Y.

Takahashi, E., Shirahama, K., and Tase, S., fats of sea algae. II., A., III, 190. Takahashi, J. See Kaku, T. Takahashi, R. See Kondo, M.

Takahashi, S., calcium metastases, A., III,

Takahashi, T. See Namekawa, T.

Takahashi, Teizo, and Asai, T., fermentation of glycerol by gluconic acid bacteria in fruits; production of dihydroxyacetone, glyceric, acetic, glycollic, and succinic acids, and a substance which gives a reddish-violet colour reaction with ferric chloride, A., III, 273. Fermentation products of acetic acid bacteria associated with fruits; formation of galactonic and komenic acid from galactose, A., III, 273. Takahashi, Torizo, synthesis of p-benzyl-

thiolbenzenearsinic acid, A., II, 220.

Takahashi, W. N., and Rawlins, T. E., stream double refraction of preparations of crystalline tobacco-mosaic protein, A., III, 147.

Takahasi, K., glycocholase in yeast, A., III, 432.

Takai, T. See Hagisawa, H.

Takaki, H., magneto-striction of iron crystals at high temperatures, A., I,

Takamiya, E., oil- and fat-splitting enzyme

from plant seeds, (P.), B., 1396.

Takano, M., partial hydrogenation of fish oil. VI.—VIII., A., II, 482; B., 1082. Tokano, T., change in immunising power of typhoid bacilli in a medium containing homologous immune sera and the formation of a new variety, A., III,

Takase, S. See Akaberi, S.

Takata, Y., determination of blood-lipins, A., III, 84. Fat metabolism in nervous tissue of B-avitaminotic pigeons, A., III, 103.

Takatori, N., paramagnetic susceptibility of colloidal powder of platinum, A., I, 174.

Takayama, Y., Harada, Takeshi, and Miduno, S., amino-acids and related compounds. XI. Formation of aldehydes by electrolytic oxidation of a-amino-acids, A., II, 402.

and Miduno, S., amino-acids and related compounds. X. Electrolytic oxidation of aspartic acid and malonic acid, A., Il, 402.

Takebayashi, M. See Urushibara, Y. Takeda, E. See Kikuchi, Seishi. Takeda, Yoshiharu. See Grundmann, C.

 Takeda, Yoshito. See Nakazawa, R.
 Takei, S. Sakato, Y., and Ono, Minoru, essential oil of green tea. VIII. Linalool and acetophenone, A., II, 82. Odorous substances of green tea. IX. Carbonyl compounds of black tea oil, A., III, 503.

Takens, E. Sce Maschmeijer, A. J. H. Takes, H. V. Scc Böeseken, J.

Taketa, T., Irie, H., and Shibata, F. L. E., electrochemical investigation of potassium silicate hydrates, A., I, 621. See also Shibata, F. L. E.

Takeuchi, T., and Inai, T., detection of artificial radioactivity in a photographic emulsion, A., I, 212. Specific volumes of heavy water and its ice at the f.p., A., I, 231.

Takô, H., electric discharge through open capillary tube, A., I, 104.

Takubo, J., and Ukawa, H., minerals containing rarer elements; allanite found in Kanbe village, Mara Prefecture, A., I, 432.

Tal. E. M. See Fainberg, S. J.

Talaat, M. See Anrep, G. V. Talbot, A. M., and Norton, J. T., agehardening of magnesium-aluminium alloys, B., 1357.

Talbot, F. B., and Bates, V., effect of

ketogenic diet on blood-sugar and respiratory quotient of children, A., III,

Talbot, H. J., Weiss, R. G. A., and Dorr-Oliver Co., clarification or sedimentation treatment of liquids, (P.), B., 304.

Talbot, W. F. See Esselen, G. J.

Talbot, Crosbie, J. B. See Duncan Stewart & Co.

Talbott, J. H., Coombs, F. S., and Consolazio, W. V., electrolyte balance during recovery from mercuric chloride poisoning, A., III, 391. See also Dill, D. B.

Talbott, N. S. See Hochwalt, C. A., and Thomas, C.A.

Talenti, M., and Ragno, A., sulphurous mineral water of the lower lake of Fontana Liri (Frosinone) called "solfatara," A., I, 51. Acetous Ostian water from the Laurentine Way near Rome, A., I, 203.

Taliaferro, D. B., jun., Johnson, T. W., and Dewees, E. J., determining porosity: list of porosities of oil sands, B., 1285.

Talina, M., catalytic action of Fe(OH)3 on oxidation of SO₂ to SO₃ by atmospherio oxygen, A., I, 625.

Talkovski, G. B., automatisation of the d'Arsonval thermostat, A., I, 265.

Tall, E. M. See Jolson, L. M.

Tallenburg, D. G., testing liver function in mercury workers, A., III, 351. Talley, S. K. See Anderson, A. P

Talmud, B. A. See Afanasiev, P. V.

Talmud, D. L. See Afanasiev, P. V., Fedorov, F. P., and Zaidlin, A. E.

Talmud, I. L., and Musjakov, V. A., preparation of aluminium oxide, sodium hydroxide, and cement from nepheline, B., 34.

Talmud, S. L. See Shukov, I. I.
Tamamushi, B., chemiluminescence of 3-aminophthalhydrazide under action of molecular oxygen and hæmin as catalyst, A., I, 346. Thixotropy of suspensions of a Japanese hydrogen clay, A., I, 410.

and Akiyama, H., cis-trans-rearrangement of ethylene compounds catalysed by molecular oxygen, A., I, 251. Paramagnetic isomerisation of maleic acid into fumarie acid in aqueous solution, A., I, 573.

and Umezawa, H., heterogeneous reaction kinetics of conversion of dibromosuccinic acid into monobromofumarie

acid, A., I, 35.
Tamhane, V. A., report of agricultural chemist and soil physicist, Agricultural Research Station, Sakrand, 1933-34, B.,

Tamisier, A., electro-osmosis of ochre, B., 944.

Tamiya, H., and Ogura, Y., mechanism of action of the several cytochrome components in cell respiration, A., III, 355.

Tamm, I. E., atom nucleus problem, A., I, 59. β-Radioactivity and nuclear forces, A., I, 210. Theory of β -disintegration and nuclear forces, A., I, $27\overline{6}$.

See also Frank, I. Tamm, W. See Wirth, W. Tammann, G., transitions in crystals having distorted lattices, A., I, 504. Reaction limits in mixed crystals, A., I, 627. Velocity of melting [of metals], B., 929.

and Hartmann, H., determination of velocity of fusion, A., I, 71. Structure of eutectic alloys; changes produced by rolling and heating, A., I, 559. Rate of melting of iron in contact with carbon, B., 444. Influence of hydrostatic pressure on the hardening of duralumin, B., 925. and Tampke, R., scratch-hardness [of

metals], B., 355.

and Warrentrup, H., influence of temperature on potential-concentration relations for binary alloys, A., I, 74. Influence of cracks and scratches on corrosion of iron, B., 44. Temperature changes in stretching of metal [copper, nickel, and steel] rods, B., 922.

Tampke, R. See Tammann, G.
Tamura, K., structure of asebotin, a component of Andromeda japonica, Thumb, A., II, 106.

See also Majima, R., and Oda, R.

Tamura, M., photochemical union of hydrogen and chlorine, A., I, 419.

Tanabe, Tomojiro, and Koiso, G., copper alloys containing silicon, B., 48. Tanabe, Toshiichi, organic acids in cane

juice, B., 1391. See also Suzuki, Kozo.

Tanabe, U. See Soda, T.

Tanaka, G., effect of alcohol- or acetoneextracts of thyroid gland on urinary excretion of iodine, A., III, 42.

Tanaka, H. See Aoki, Y.

Tanaka, J., Kambara, S., and Hirakawa, K., oil-resistance of rubber. V. and VI., B., 1245.

Tanaka, K. See Kosaka, Y. Tanaka, K. (Osaka). See Kotake, Y. Tanaka, Keikichi, and Awano, S., total heat-entropy diagrams for combustion

gases of correct and weak mixtures, B., ĭ298.

Tanaka, M., and Nonaka, I., production of X-rays by high-speed argon ions, A., I, 337.

Tanaka, R. Seo Rokusho, B.

Tanaka, T., measurements of workability of plastic mortars, B., 555.

Tanaka, Takeshi. See Iitaka, I.

Tanaka, Y., and Iio, M., abnormal phenomena of cast copper-rich antimonycopper alloys during heating, A., I, 297. and Kambara, S., Joule effect of rubber.

II. Thermal effect with stretched latex

vulcanisates, B., 66.

and Kobayashi, R., crystal structure of the aliphatic compounds. I. and II., A., I, 172.

and Noguchi, Takashi, effect of addition of colloidal substances on coagulation of latex, B., 371.

Sec also Fujioka, Y.

Tananaev, I. V., Katz effect, A., 1, 146. and Davitaschvili, E., use of tin amalgam in chemical analysis, A., I, 48. Application of tin amalgam to analysis of alloys, B., 570.

and Djaparidze, E., potentiometric determination of potassium, A., I, 97.

and Georgobiani, M., determination of zine with an adsorption indicator, A., I, 46. Use of ethyl-blue as a redox indicator. I. Determination of lead and sulphate, A., I, 47

Tananaev, N. A., fractional reaction for Mn", A., I, 98. Theory of L_p . III. IV. L_p and the direction of chemical processes, A., I, 135, 521. [Mercury silver manganese oxalate], A., I, 372. Theory of titration. I. Evaluation of error in the saturation method, A., I, 374.

and Junitzkaja, N. V., equilibrium reactions in chemical analysis. III.

BaC₂O₄ + CO₃" ⇒ BaCO₃ + C₂O₄",

A., I, 308.

and Langer, I. N., adaptation of volu-metric analysis to the Stakhanov movement, A., I, 196.

and Lovi, R. A., fractional detection of magnesium in presence of barium, strontium, and calcium, A., I, 531.

and Pilipenko, A. T., equilibrium constant of reaction between barium oxalate and sulphate ion, A., I, 186. Action of homonymous ions, A., I,

and Romanjuk, A. N., drop reactions for detection of osmium, A., I, 151.

and Schnaiderman, S. J., equilibrium reactions in chomical analysis. I. $BaCO_3 + SO_4'' \rightleftharpoons BaSO_4 + CO_3''$, A., 1, 308. Significance of p_R in qualitative analysis, A., I, 424.

and Schtscherbina, N. V., equilibrium reactions in chemical analysis. IV. Equilibrium constant of the reaction $AgCl + CNS' \rightarrow AgCNS + Cl', A., I,$

363.

and Vereschnia, P. F., fractional reaction for tungsten, molybdenum, and vanadium, A., I, 329.

and Volkova, A. I., equilibrium reactions in chemical analysis. II. $CaC_2O_4 + Pb'' \rightleftharpoons PbC_2O_4 + Ca''$, A., I, 308.

and Voschtschinskaja, M. S., fractional reaction for chlorate, bromate, and

iodate, A., I, 529. Tanase, Y. See Asahina, Y.

Tanasesco, G. See Ciocalteu, V. Tanasescu, I., and Baciu, A., o-nitro-chalkones, A., II, 502. Additive products of o-nitrobenzaldehyde with substituted acetophenones, A., II, 503.

and Macarovici, M., acridones. Condensation of 5-chloro-2-nitrobenzaldehyde with chloro- and bromobenzene by means of concentrated sulphuric acid, A., II, 390.

and Silberg, A., acridones. X. p-Chlorophenylanthranil and 3-chloroacridone,

A., II, 306.

and Suciu, (Mlle.) M., condensation of o-nitrobenzaldehydes with aniline. III. Photochemical behaviour of the anthranils and triphenylmethanes obtained, A., II, 375.

Tanay, S. See Szebellédy, L.

Tanchico, S. S., and West, A. P., Philippine annatto dye as a colouring agent, B., 882.

Tandler, R. See Lieben, F. Tandon, A. N., lattice energy of potassium bromide and sodium bromide and the electron affinity of bromine, A., I, 398.

See also Saha, M. N.

T'ang, B. H. Y., bactericidal and destructive effects of Dakin's solution on tubercle bacilli, A., III, 359.

Tang, N. K. Seo Willard, H. H.

Tang, P. S., kinetics of cell respiration. II. Parallelism between rate of oxygen consumption by Saccharomyces Wanching and change in optical rotation of glucoso in borie acid buffers. III. Effect of ultra-violet light on rate of oxygen consumption by S. Wanching, A., III, 222.

and Gaw, H. Z., mechanism of death in unicellular organisms. I. Delayed death and change in resistance to ultraviolet radiation in Paramecium bursaria with age of culture, A., III, 175.

and Lin, C. Y., downward shift of $p_{\rm H}$ caused by addition of glucose to boric acid buffer solutions, A., I, Kinetics of cell respiration. Oxidation-reduction potentials Chlorella suspensions in light and in darkness, A., III, 500.

Tang, T. H., and Chao, Y. S., chemical constituents of hsiung-chang (bear's paw), A., III, 119. Action of carbon monoxide on oxycholesterol in blood I., A., III, 195.

Chao, Y. S., and Kou, F. C., acid-resisting properties of "As 2" alloy steel,

and Sung, T. T., influence of ultra-violet light on saccharifying power of diastase in malt, B., 1257.

Tang, Y. C., Yen, W. H., and Hsü, H. C., determination of crude fibre and cellulose in foods and fodder, B., 838.

Tangari, C. See Saviano, M.

Tange, U., effect of extracts of rice polishings and beef liver on pellagra-like symptoms of rats due to a high-sucrose diet, A., III, 495.

Tanghe, L. J. Seo Wolfrom, M. L. Taniguchi, M., and Sakurada, I., diffusion of compounds of high mol. wt. and related compounds. V.—IX., A., I, 79. Diffusion and viscosity of cellulose nitrate in various solvents, B., 811. Solution of cellulose derivatives, B., 811. Three-layer method of [measuring] diffusion [constants], B., 811. See also Sakurada, I.

Tanislau, I. See Ostrogovich, A.

Tankard, J., absorption of water by cellulose and cellulose compounds, B., 1186.

Tanner, F. W., and Oglesby, E. W., influence of temperature on growth and toxin production of Clostridium botulinum, A., III, 182.

See also Clark, Francis M.

Tanner, R. R., Lodecsen, H. J., and Metal Finishing Res. Corp., coating [ferrous] metal surfaces [for rust protection], (P.), B., 1070.

and Metal Finishing Res. Corp., coated aluminium article, (P.), B., 581.

Tanner, T. G. See Birmingham Electric Furnaces.

Tanteri, B., analysis of pietra di Trani [limestone], B., 33.

Tanzi, B., influence of some -onium salts on glycemia; tetramethylammoniumhyperglycæmia, A., III, 134. Tao, P. C. See Sah, P. P. T.

Tapadinhas, J. See Jacobsohn, K. P., and

Pereira-Forjaz, A.
Taperova, A. A. See Belopolski, A. P.

Tapia, E. See Ribas, I. Tapp, T. C. See Hicks, (Sir) M.

Tapp, W. See Schimunek, J.
Tappe, W. See Hückel, W.
Tappi, G., dioximes. CXXII., A., II, 443.

See also Ponzio, G.

Taradoire, F., purification of chlorates, A., I, 373. Analysis of shellac, B., 60. Determination of orpiment in lacquer gums, B., 699.

Taranenko, I. T., determination of metallic iron in presence of ferric and ferrous oxide, A., I, 264. Simultaneous determination of ammonia and hydrogen sulphide in dark and coloured liquids, A., I, 631. Simultaneous determination of zinc and zino sulphide in zinc oxide, B., 540.

Taranik, J. D. See Madison, R. R.
Taranovskaja, V. G., soil-absorbing complex from the agronomic viewpoint: chemisation of agriculture in the subtropics, B., 597.

Tarantino, C., oxygen consumption of tissues as a function of $p_{\rm H}$ of the media, A., 11I, 465.

Taras, M. H. See Pacini, A. E. Tarasenkov, D. N., vapour pressure of salts of metals, A., I, 354. and Komandin, A. V., influence of an

inert solid phase on the f.p. of water and dilute aqueous solutions. III. Amount of freezable water in presence of quartz sand and starch, A., I, 27.

Tarasenkova, E. M. See Orlov, N. A. Tarasevitsch, N. I., and Prshevalski, E. S., determination of purity of acetic an-

hydride, B., 646.
Tarasov, L. P., and Bitter, F., precise magnetic torque measurements on single crystals of iron, A., I, 555.

Tarasova, E. M., inertness of cyclopentane hydrocarbons with respect to dehydrogenation catalysis, A., II, 282.

Tarasova, V. P. See Konobejevski, S. T. Tarassov, V. V., Bering, B. P., and Sidorova, A. A., experiments on compressibility of binary solutions by electro-acoustic methods, A., I, 177.

Tarassuk, N. P. See Palmer, L. S. Tarbell, D. S., and Bartlett, P. D., mechanism of additive reactions; chloro- and bromo-β-lactones from dimethylmaleic and dimethylfumaric acids, A., II, 135.

Tarlazis, C., and Dimitropoulos, E., lipin metabolism of birds, A., III, 129.

Tarr, W. A., origin of the S.E. Missouri lead deposits. I. and II., A., I, 204. Origin of the marcasite sink-hole deposits of Central Missouri, A., I, 586.

Tarschisch, L. See Makarov, E. S. Tartakovskaja, V., Bondarenko, J., and Jemeljanova, L., conductivity and viscosity of the systems H₂SO₄-CHCl₂·CO₂H and H₂SO₄-CH₂Cl·CO₂H, Å., I, 507.

Tartakovski, I. S. See Finkelstein, V. S. Tartakovski, M., and Matveev, V., regeneration of [viscose] precipitating baths, B.,

Tartakovski, P., inner effect in the ultraviolet, A., I, 164.

and Poddubni, V., photo-electric conduction in rock-salt crystals under ultra-violet illumination, A., I, 114.

Tartar, H. V., Colman, I. S., and Kretchmar, L. L., determination of primary calcium phosphate in mixtures of the calcium orthophosphates, A., I, 531. See also Cone, W. H., and Hunt, H.

Tasaka, M. Sec Asahina, YTaschek, R. See Williams, D. Taschner, E., Gottlieb, G., and Spritzer, M., effect of X-rays on carcinogenic action of methylcholanthrene, A., III, 205. Spritzer, M., Gottlieb, G., and Lazar, D.,

action of carcinogenic substances on blood-leucocytes, A., III, 193.

Tase, S. See Takahashi, E.

Tasker, H. S. See Powell, Herbert M. Tasman, A., determination, purification, and concentration of antigens and antibodies, A., III, 166.

Tata, G., urinary climination of folliculin, A., III, 74.

Tatarinova, L. See Pinsker, S.

Tatarski, I. A. See Trachtenberg, A. M. Tate, F. G. H., and Warren, L. A., optical rotation and refractivity of nicotine and nicotine sulphate in dilute aqueous solution, A., 1, 169.

Tate, G. E. See Sieder, E. N.

Tate, H. D., and Andre, F., toxicity of nicotine and soap to gladiolus thrips (Taniothrips simplex, Morison) and tobacco thrips (Thrips tabaci, Lindeman), B., 712. Tate, J. T.

See Williams, John H.

Tatematsu, K. See Masayama, T. Tatievskaia, E. P. See Tschufarov, G. I. Tatimori, M., density change by [during] oxidation of linseed oil, B., 257. Oxidised and polymerised oils. I. Viscosities of dilute solutions. II. Relations between characteristic viscosities and cooking degrees of linseed oil, B., 806, 939.

Tatman, E. C. See Foster, A. C.
Tatsumi, M. See Kasahara, M.
Tattersfield, F., developments in research

on insecticides. I., B., 602.

and Martin, J. T., evaluation of rotenonecontaining plants. III. Optical activities of D. elliptica, B., 714. Optically active constituent of derris resin related to toxicarol, B., 728.

See also Jary, S. G., and Martin, J. T. Tatum, A. L. See Werner, H. W. Tatum, E. L., Peterson, W. H., and Fred,

E. B., essential growth factors for propionic acid bacteria. I. Sources

and fractionation, A., III, 224. Wood, H. G., and Peterson, W. H., essential growth factors for propionic acid bacteria. II. Neuberg precipitate fraction of potato: replacement by ammonium sulphate or by aminoacids, A., III, 224.

See also Snell, E. E., and Wood, H. G. Tatum, H. J. See Kozelka, F. L.

Taub, A. H., quantum equations in cosmo-

logical spaces, A., I, 215. Taube, H. See Spinks, J. W. T.

Taubenhaus, J. J., and Boyd, G. T., fungicidal properties of sulphur, B.,

See also Boyd, G. T., and Ezekiel, W. N. Tauber, H., interaction of peroxidase and ascorbic acid in biological oxidations and reductions, A., III, 155. Stability of vitamin-C and absence of ascorbic acid oxidase in citrus fruits and milk, A., III, 189. Enzymic synthesis of cocarboxylase, A., III, 428.

and Kleiner, I. S., chemistry of catalase, A., III, 67.

See also Kleiner, I. S.

Taubmann, A., surface activity and orientation of molecules in surface layers. IX. Surface activity of non-polar molecules of hydrocarbons, A., I, 26.

Taurins, A., reaction between p-hydroxyazobenzene and organo-magnesium compounds, A., II, 335.

Tauson, N. See Grüner, V.

Taussky, I., extraction of fatty residues, B., 805.

Tauzin, P., ignition of detonating gas [mixtures] at low pressure, A., I, 33.

Tavasci, B., constitution of Portland

cement clinker, B., 784. Taveau, R. de M. See Texas Co. Tavroges, J. See Cow & Gate, Ltd.
Tawada, K., effect of ozone on spontaneous

ignition phenomena of hexane, A., I, 36. Tawde, N. R., characteristics associated with constants of the diatomic halogen and alkali molecules, A., I, 170.

and Trivedi, S. A., vibration temperature in relation to rotation temperature in band spectra, A., I, 547.

Taxner, C., canning of tomato purće [in Hungary], B., 974.
Tayenthal, W. See Janke, A.

Taylor, A. See Bradley, A. J.
Taylor, (Miss) A. C. See Cann, (Miss) J. Y., and Hitchcock, D. I.

Taylor, A. K., photometric test plates, A.,

Taylor, A. M., recovery of phenol [from gas liquor, etc.], (P.), B., 1175. Taylor, A. R. See Swingle, W. W.

Taylor, C. A., and Furr, J. R., effect of decreasing soil-moisture supply on size of lemons, B., 601.

Taylor, C. B., and Lochhead, A. G., Bacterium globiforme, Conn., in soils differing

in fertility, B., 1254.
Taylor, C. F., and Blodgett, F. M., potatoscab control in western Now York, B., 602. Taylor, C.S. See Kempf, L. IV., and Mason,

Ralph B.

Taylor, E. A. See Grasselli, Chem. Co. Taylor, F. H. L., Castle, W. B., Heinle, R. W., and Adams, M. A., correlation of in vitro activity of normal human gastric juice on casein at $p_{\rm H}$ 7.4 with gastric intrinsic factor, A., III, 417.

See also Groen, J., and Wilkins, R. W.

Taylor, F. L. See Smith, L. I. Taylor, F. M. See Brooks, W. H. Taylor, G. E. See Gen. Chem.

See Gen. Chem. Co., and King, P. H.

Taylor, G. O., preparation of light-metal

surfaces for painting, B., 687.
Taylor, G. R., Smith, R. N., and McColl-Frontenac Oil Co., solid [dehydrated] Inbricants, (P.), B., 323.

Taylor, G. T. See Bailey, K. C.

Taylor, H. A. See Burton, M.

Taylor, H. F., explosions attributed to interaction between ethyl peroxide and sulphur, A., II, 318.

Taylor, H. L. See Logan, M. M.

Taylor, H. S., catalytic reactions among complex molecules, A., I, 252. Large molecules in science and life, A., I, 349. and Joris, G. G., characteristics of a copper catalyst activated magnesium oxide, A., I, 524.

and Jungers, J. C., polymerisation of ethylene and acetyleno photosensitised

by acetone, A., I, 574.

See also Benedict, W. S., Burwell, R. L., jun., Morikawa, K., and Trenner, N. R. Taylor, I. B., and Waters, R. M., leucocytosis following inhalation anæsthesia,

A., III, 217. Taylor, I. R., and Crescitelli, F., heat production of small organisms, A., III, 464.

Taylor, James, high-temperature oven coke and the open fire, B., 103. See also Imperial Chem Industries.

Taylor, John, and Ahiya, M.L., toxicity tests of novarsenobenzene in white mice bred in India, A., III, 310.

Mallick, S. M. K., and Ganguly, S. N., preservation of coagulant solutions of daboia venom, A., III, 453.

14

Taylor, J. B., and Langmuir, I., vapour pressure of casium by the positive ion method, A., I, 354. Properties of cæsium and oxygen films on tungsten, A., 1, 562.

Taylor, J. E., results of chip packing and indirect cooking in sulphite [pulp] mill

operation, B., 425.

Taylor, J. F. M. See Shell Development Co.

Taylor, J. H., accessory minerals of igneous rocks, A., I, 431. See also Ellman, P.

Taylor, J. I., and North American Rayon Corp., thread and fabric [from rayon], (P.), B., 772.

Taylor, J. K., use of moisture equivalent as an index of texture for soil-survey purposes, B., 376.
Taylor, John K. See Tilton, L. IV.

Taylor, J. R., jun. Sec Truog, E.Taylor, K. Sec Standard Oil Co., and Wells, L. S.

Taylor, K. B., alkaloids of curare, A., III, 138.

Taylor, L. F., determination of fluorine, B., 1046.

Taylor, L. S., ionisation of carbon disulphide by X-rays, A., I, 64.

Taylor, M., and Willcox, V. R., transference of water. III. Its dependence on concentration in electrolysis of barium chloride solutions, A., I, 414.

Taylor, M. D. See Internat. Hydrogenation Patents Co.

Taylor, M. K. See Ferranti, Ltd.

Taylor, M. M., stability of provitamin-A in lucerne and in silage, B., 494. Taylor, M. W. See Russell, W. C.

Taylor, N. B., Weld, C. B., and Sykes, J. F., relation of bile to absorption of vitamin-D, A., III, 156.

Taylor, N. H., reconditioning of asphalt paving materials, (P.), B., 245. Compositions for covering roads, floors, walls, tennis courts, etc., (P.), B., 443.

Taylor, N. W., production of dense aggregates, B., 299.

and Dear, P. S., elastic and viscous properties of several soda-silica glasses in the annealing range of temperature, B., 1204.

McNamara, E. P., and Sherman, J., elastico-viscous properties of a sodalime-silica glass at temperatures near the "transformation point," B., 545.

and Williams, F. J., reactions between solids in the system CaO-MgO-SiO2 in the temperature range 600-1200° A., I, 30.

Taylor, Raymond, high-pressure technique, B., 400.

Taylor, Rex, multi-service wash bottle, A., I, 636. Analysis of cast and pig irons; determination of total carbon, graphite, and silicon with the combustion furnace, B., 47.

Taylor, R. B., pressure-cooking of cotton-

seed, B., 1233.

Taylor, R. F. See Dobson, R. H.Taylor, R. K., automatic compensation of flowmeters for pressure variations, A.,

Taylor, R. L., [manufacture of] sorbitol from glucose by electrolytic reduction, B., 1393.

Herrmann, D. B., and Kemp, A. R., diffusion of water through [electrical] insulating materials; rubber, synthetic resins, and other organics, B., 54.

Taylor, S. S., and Christianson, I. F. application of sand filters to oilfield brine-disposal systems, B., 866. See also Johnson, T. W.

See Ingham's Thornhill T. Taylor, Collieries.

Taylor, T. G. See Gonnerman, H. F. Taylor, T. I., and Urey, H. C., electrolytic and chemical exchange methods for the separation of the lithium isotopes, A., 1, 470.

Taylor, T. W. J. See Jenkins, G. I., and Murray, (Miss) A. R.

Taylor, W. See Imperial Chem. Industries. Taylor, William, mechanism of hydrolysis and alcoholysis of alkyl halides: reactions of methyl, ethyl, and tert. butyl bromides with aqueous ethyl alcohol, A., I, 417. Action of phosphorous pentahalides on acetophenone, A., II, 153. Displacement of bromine from monoand dibromo-ethylbenzenes, A., II, 182. Structure of aliphatic compounds: Walden inversion, A., II, 437.

Taylor, W. C., glass-durability [test] methods, B., 137.

and Corning Glass Works, high-electrical resistant, soft glass composition, (P.),

and Smith, R. D., solubility characteristics of glasses basically different in composition, B., 37.

Taylor, \hat{W} . F., and Lackey, R. W., minimal hypnotic effect, toxicity, and pathological effect of sodium and magnesium salts of phenobarbital, A., III, 26.

Taylor, W. H., rearrangement of aryl alkyl

sulphides, A., II, 98.

Taylor, W. I. See Brit. Celanese,

Taylor-Austin, E., determination of molybdenum in cast iron, B., 444.

Taylor Instrument Companies. See Clawson, A. E., Hurlburt, E. N., Norwood, H. Y., and Olson, R. E.

Tazawa, Y., fission of glycylglutamic anhydride by crystalline trypsin, A., III, 429.

and Yamagata, S., utilisation of aminoacids, polypeptides, and dikotopiperazines in the growth of fungi, A., Ill,

See also Shibata, K.

Tchakhotine, S., radiations, cell permeability, and colleidal changes, A., III,

Tchakirian, A., electrolysis of gormano-chloroform or hydrochlorogermanic acid, A., 1, 193. Quinine and strychnine germano- and zircono-oxalates, A., II, 217.

See also Bardet, J., and Lecomte, J. Tehang, Y. L. See Delfosse, J. M., and Lemaitre, G.

Tcherkozov. See Hugel, G. Tchistov, V. O. See Uschakov, M. J. Tchoubar, (Mlle.) B. See Poctivas, M., and Tiffeneau, M.

Te-Tchao, O., size of smoke particles suspended in air, A., I, 237.

Teague, F. C. D., and Detel Products, Ltd., coated sheet or strip material for use as a protective coating, (P.), B., 434.

Teakle, L. J. H., soil surveys in Western Australia, B., 1095.

Teale, F. H., relative importance of reticulo-endothelial tissues and circulating antibody in immunity. II. Hypersensitiveness and immunity to foreign proteins, A., III, 5.

Teare, J. W. See Akerlöf, G.Tears, C. F., and Petroleum Processes Corp., dewaxing and partly decolorising petroleum lubricating stock, (P.), B.,

521. Teatini, D., sulphur-burning apparatus, (P.), B., 438. Centrifugal separators, (P.), B., 633.

Teats, R., and Amer. Smelting & Refining Co., separation of zinc and cadmium in sulphate solution, (P.), B., 779.

Tebbens, B. D., atmospheric lead contamination from high-temperature lead baths, B., 297. Portable combustion apparatus for field determinations of chlorinated hydrocarbons [in air], B., 733.

Tebinov, S. A., synthesis of benzalfurfur-alazine, A., II, 205. Synthesis of benzylidene-ethylidencazine, A., II, 292. Synthesis of furfurylidene-ethylideneazine, A., II, 298.

Technicolor, Inc. See Clark, A. B. Technicolor Motion Picture Corporation.

See Burbank, B. B. Techno-Chemical Laboratories, Ltd. See

Testrup, N. Technothermie Société a.r.l., tunnel kilns,

(P.), B., 672.

Tedeschi, G., oxidation of univalent nickel by action of water in presence of CN' ions, A., I, 147. Causes of evolution of oxygen from lead accumulators at rest, B., 459.

Teegan, J. A. C., comparison of the y-ray intensities from radium preparations, A.,

Teeters, W. O. See Muller, Ralph H. Teichert, K., biological properties of lactalbumin, A., III, 9.

Teichmann, C. F. See Texas Co. Teik, G. L. See Georgi, C. D. V.

Teilum, G., increase in blood-cholesterol in man after castration, A., III, 322. Teindl, J. See Glazunov, A.

Telefunken Ges. für Drahtlose Telegraphie m.b.H., [apparatus for] production of fluorescent images from optical or

infra-red images, (P.), B., 1231. See also Kotowski, P., and Osnos, M. Telegraph Condenser Co., Ltd. See Stephan, F, C.

Teletov, I. S., and Bistritzka, S. J., determination of phosphoric acid in superphosphates and phosphorite meal, without the use of citric acid and ammonium molybdate, B., 1334.

Telinek, B., characteristic reaction of yperite $(\beta\beta'$ -dichlorodiethyl sulphide), A., II, 480.

Tell, D. E., measuring and controlling absolute pressure, (P.), B., 631.

Toller, E., crossing of potential surfaces, A., I, 170.

See also Gamow, G., Herzberg, G., Jahn, H. A., Lord, R. C., jun., and Schwinger, J.

Teller, G. L., relation of the two sugarforming diastases to the Lintner number, B., 829.

Telnov, S. M. See Demianov, N. J. Temianko, V. S. See Lapin, N. N. Temme, T, surface relations in bitumen-

mineral mixtures [for roads], B., 1345.
Temnikova, T. I. See Favorski, A. E.
Temple, P. L., apparatus for rapid and

economical determination of f.p. of milk, B., 1398.

Templeman, IV. G. See White, H. L. Templeton, H. J. See Lyons, W. R.

Templeton, H. L., and Sommer, H. H., [metal] wrappers for processed cheese, B., 723. Emulsifying salts used in processed cheese, B., 1124.

Templeton, R. D. See Chang, S. Templin, R. L. See Aluminium, Ltd. Tendeloo, H. J. C., use of crystals as calcium electrodes, A., I, 253. Ion equilibria in milk, B., 80. See also Habers, L.

Tendick, F. H. See Marker, R. E. Tenenbaum, A. L. See Korenman, I. M. Tenenbaum, D. See Smith, L. I.

Tenner, A. See Strohecker, R.

Tennessee Corporation. See Plummer, J. K.Tennessee Eastman Corporation. See Othmer, D. F.

Tennessee Valley Authority. See Curtis, H.A.

Tenney, A. H. Sco Hixson, A. W.

Tenny, H. S., moulded articles of paper and similar felted materials, (P.), B., 537. Teodoro, A. L., alcohol and alcohol-gasoline blends as fuels for auto-motive engines. III., B., 407. and Ongsansoy, E. K., alcohol and alco-

hol-petroleum as fuels for automobile engines. VI., B., 641.

Teorell, T., quantitative theory of membrane permeability, A., III, 56.

Teplitz, A. J. See Ambrose, H. A., and Loomis, A. G.

Teplouchova, M. I., isothermic determination of grain size of steel, B., 1062.

Teply, M., variation in the butyric index of butter fat, B., 804.

Teppema, J. See Wingfoot Corp.

Ter-Pogossian, A., theory of β -decay, A., I,

Térache, P. See Liégeois, F.

Teria, K., and Ichitsubo, H., influence of amino-acids on the adrenaline-iodic acid value, A., III, 24.

and Nomura, S., influence of oxidationreduction on adrenaline action. IV., A., III, 38. Terasaka, Y. See Kondo, M.

Teraschkevitsch, V. R., and Baranova, R. I., regeneration of ammonia by means of unslaked lime in the ammonia-soda process, B., 901.

and Evetzki, G. N., preparation of sulphur from gypsum, in conjunction with the ammonia-soda process, B., 665.

and Kotelevski, J. P., intensification of process of calcination of sodium bicarbonate, B., 1198.

and Vischnevski, A. N., purification of oven gas in the ammonia soda process, B., 236.

Terem, H. N., determination of barium and lead, A., I, 199. Corrosion of [copper-] beryllium bronzes, B., 794. Oxidation of beryllium bronzes, B., 1220.

Terenin, A., and Clement, F., fluorescence of salts surface-activated by condensed metals, A., I, 11.

and Prileshaeva, N. A., effective crosssection in the recombination of atoms on irradiation, A., I, 16.

See also Gatschkovski, V., Nenjmin, G. G.,

Neujmin, H., and Prileshaeva, N. A.

Terentiev, A. P., and Goriatscheva, G. S.,
application of chromous salts to reductometric determination of organic substances, A., II, 359. and Kedrov, B. M., influence of reaction

conditions on yields of isomerides in nitration of acetanilide, A., II, 286.

Terentiev, A. P., and Magaram, K. K., detection and determination naphthalene-1- in presence of -2-sulphonic acid, B., 1017.

and Terentieva, E. M., detection and determination of naphthalene-1:5and -1:6-disulphonic acids, B., 1017.

Vinogradova, E. V., and Halpern, G. D., diazometric determination of diene hydrocarbons. II. Determination of individual diene hydrocarbons. III. Determination of diene hydrocarbons in pyrobenzines, B., 1017.

and Zegelman, M. E., action of diazocompounds on unsaturated compounds; determination of mono- and polymeride of phenylbutadiene, A., II, 283.

Terentieva, E.M. See Terentiev, A.P. Terentieva, I. See Tzukervanik, I.P.Tereschtschenko, A. V., and Dudavski, I. E., regulating plastic properties of

clay, B., 912. and Pindrik, B. E., influence of adsorptivity of clay and composition of sorption complexes of clay on its

coramic properties, B., 345. Terleski, J. T. See Harper, D. A., and Hilditch, T. P.

Terlikowski, F., and Byczkowski, A., application of Neubauer's method to evaluation of phosphate fertilisers, B.,

"Terni" Società per l'Industria e l'Elettricità, use of liquid fuel in open-hearth furnaces, (P.), B., 413.

Terpstra, P., and Berg, J. ter, crystal forms of complex salts of triaminopropane with tervalent cobalt and rhodium, A., I. 554.

See also Jaeger, F. M., and Klasens, H. A. Terpugov, S. V., and Tiktina, A. M., preparation of crystalline magnesium sulphate from serpentines, B., 904.

Terra, H., [writing] ink, (P.), B., 471. Terrell, H. T., Hughes, E. M., Carter, P. L., and Sun Oil Co., removal and purification of soaps from asphaltic still bottoms, (P.), B., 1304.

Terres, E. See Edeleanu, Ges.m.b.H. Terrey, H. See Butement, F. D. Leach, R. H., and Ovenston, T. C. J.

Terrien, J., excitation by resonance of the fundamental doublet of copper in cuprous chloride vapour, A., I, 216. Excitation of CuCl bands by fluorescence in cuprous chloride vapour, A., I, 216. Terrier, J., determination of soluble glucides

(carbohydrates) in dietry bread, B., 1119. Determination of added starch in preserves of spinach, B., 1125.

See also Valencien, \hat{C} . Terroine, E. F., and Bonnet, R., regulators of nitrogenous metabolism. Thyroxine, A., III, 344.

De la Bernardie, A. M., and Lelu, P., effect of external temperature on metabolism of creatinine and creatine, A., III, 344.

and Firdman, J., course of excretion of various substances in exogenous protein catabolism, A., III, 303.

and Synephias, S., relative participation of proteins and fats in the production of energy during inanition, A., III, 420. Terry, M. C., hemolytic complement

albumin-globulin ratio, A., III, 55. Tertsch, H., distribution and geometry of twinning phenomena, A., I, 287. Anisotropy of polish-hardness of barytes, A., I. 383. Chiastolite crystals, A., I, 587.

Teruyama, K. See Maruta, Y. Teshima, S., decomposition of calcium cyanamide and somo derivatives in soil, B., 596.

Tessmar, K. See Leuchs, H.

Testrup, N., Gram, T., Hartmann, P., and Techno-Chem. Labs., disintegrated peat, (P.), B., 13. Testut, R., formation of chromium carbides,

A., I, 42.

Tête, H. See Mouriquand, G. Teterin, V. K. See Salkind, J. S.

Tetsch, C., and Wolff, K., analogy between bee and snake (Crotalus) poisons, A., III, 9. Scorpion toxin, A., III, 297. See also Rheinboldt, H.

Tetsumoto, A. See Ishibashi, M. Tetsumoto, S., storilising action of acids. VIII. Relationship between stereochemical constitution of fatty acids and physiology of bacteria. I. Isomeric physiology of bacteria. cis-trans acids. II. Optically active acid isomerides, A., III, 359.

Tettamanzi, A., double decomposition of triethanolamine soaps and sodium

chloride, B., 805.

Teunissen, P. H., chemistry of lipoidosis phosphatidica, A., III, 379.

Teves, M. C. See Coeterier, F., and Radio Corp. of America.

Texaco Development Corporation, motor fuels and antiknock reagents therefor, (P.), B., 520.

and Towne, C. C., lubricating oil, (P.), B., 413.

Seo Langer, Texaco Salts Products Co. T. W., and Martin, O. V.

Texas Co., and Chebotar, L. P., treatment

of mineral oils, (P.), B., 320. and Clarke, L. A., motor fuel, (P.), B., 17. Solvent refining [of hydrocarbon oils with nitro-alcohols, (P.), B., 210. Solvent extraction of hydrocarbon oil, (P.), B., 1012. Solvent refining of oil, (P.), B., 1161.

Clarke, L. A., and Levin, H., petroleum distillate products, (P.), B., 201.

and Colligan, F. X., marking petroleum products, (P.), B., 1307.
and Colmar, R. I., [asphalt] plastic composition, (P.), B., 812.
and Davis, E. L., increasing production from wells, (P.), B., 1010.

and Dearborn, R. J., refining mineral oil

with solvents, (P.), B., 1161. and De Florez, L., heating of [hydrocarbon] fluids, (P.), B., 323.

Gardner, E. W., Roden, H., and Felder,

D. H., [asphalt] coating composition, (P.), B., 1375. Gross, H. H., and Overbaugh, W. V., de-

waxing hydrocarbon oil, (P.), B., 1012.
Gullette, W. S., and Kimball, T. B.,
furnace [for heating hydrocarbon fluids], (P.), B., 645.

Halpern, M., Logan, W. B., Manley, R. E., and Ullrich, W., pyrolysis of hydrocarbon gases, (P.), B., 209. and Hendrey, W. B., lubricating compound, (P.), B., 1307.

and Kaufman, G., lubricants, (P.), B., 18, 874.

Kaufman, G., and Puryear, O. P., lubricants, (P.), B., 1165, 1306. and Knowles, E. C., dewaxing hydrocarbon oil, (P.), B., 1164. and Loeb, H. D., furnace for heating

fluids [hydrocarbons], (P.), B., 323. and McAllister, C. B., burning of coke from heater tubes, (P.), B., 1016. Texas Co., McCarty, B. Y., and Skelton, W. E., removal of wax from hydrocarbon oil, (P.), B., 210, 322.

and Manley, R. E., solvent refining of hydrocarbon oil, (P.), B., 322. Dewax-

ing of hydrocarbon oil, (P.), B., 323. Lubricating oil, (P.), B., 1165. Manley, R. E., and Gross, H. H., rofining hydrocarbon oil, (P.), B., 322. Lubricating oil (P.) 8 324 Lubricating oil, (P.), B., 324.

Manley, R. E., McCarty, B. Y., and Gross, H. H., removal of wax from hydrocarbon oil, (P.), B., 1012.

Manley, R. E., and Ullrich, W., treatment of hydrocarbon oils, (P.), B., 1161.

and Moore, W. F., treatment of hydrocarbon oils, (P.), B., 323.

and Nelson, R. F., lubricants, (P.), B., 1015, 1164. Nelson, R. F., and Zapf, L., purification

of naphthenic acids, (P.), B., 320. and Overbaugh, W. V., treatment of sour

hydrocarbon oil, (P.), B., 1302. and Pevere, E. F., lubricating oil, (P.),

B., 323, 1015. Dewaxing hydrocarbon oils, (P.), B., 1164.
Pevere, E. F., and Ludeman, C. G.,

lubricating oils, (P.), B., 211.

and Puls, J. H., entrainment separator for fractionating towers, (P.), B., 1289. and Remy, T. P., insecticide and fungicide, (P.), B., 827, 1108.

and Ritchie, A. V., cracking of oils, (P.), B., 323.

and Scoville, L. P., bubble tray, (P.), B.,

and Story, Le R. G., petroleum distillate product, (P.), B., 17. Treatment of hydrocarbon oil, (P.), B., 646. Refining of hydrocarbon oils, (P.), B., 874.

and Stratford, W. M., motor fuel, (P.), B., 19. Treatment of hydrocarbon

oils, (P.), B., 873. and Tayeau, R. de M., motor fuel, (P.),

B., 211. Glycols, (P.), B., 524. and Teichmann, C. F., treatment of alkaline solutions [used in sweetening

oil], (P.), B., 645. and Thurston, R. R., bituminous dispersions, (P.), B., 319. and Towne, C. C., treatment of hydrocarbon gases, (P.), B., 1012.

and Trow, R. F., conversion of hydrocarbon oils, (P.), B., 413.

and Watson, C. W., treatment of hydrocarbon oils, (P.), B., 321.

Texas Gulf Sulphur Co. See Bencowitz, $I_{\cdot,\cdot}$ and Duecker, W. W.

Texas Pacific Coal & Oil Co. See Levine, I. M., Pfau, G. M., and Zublin, E. W. Tha, P. See Peacook, D. H.

Thaddea, S., protein metabolism in experimental adrenal insufficiency, A., III, 72. Thakur, A. K., technical process for wash-

ing and refining stick lac, B., 1369. Thakurta, A. G., and Dutt, B. K., effect of variation of temperature on respir-

ation of the flower of Helianthus annuus, A., III, 329.

See also Dutt, B. K.

Thaler, H., application of chromatographic analysis to detection of artificial colouring in fats and oils, B., 464. Cellulose of foodstuffs and fodder. II. Correlation between cellulose content and furfuraldehyde value of cacao beans, B., 615. Structure of cell-wall of cacao bean, B., 615. See also Täufel, K.

Thaler, J. I., permeability of tissue cells to potassium, A., III, 54.
Thallmayer, H. See Fürth, O.
Thames, F. C., determination of phthalato

plasticisers, B., 154.

Thanheiser, G., determination of gases in steel by hot-extraction method, B., 47.

and Maassen, G., application of the polarograph in iron-works laboratory. I. Determination of copper, nickel, and cobalt in presence of each other in steels, B., 921. Polarographie determination of copper, nickel, and cobalt in presence of one another in

steels, B., 1216.
Thannhauser, S. J., and Setz, P., animal lipins. XI. Reineckate of polydiaminophosphatide from spleen. XII. Deterof diaminophosphatide in mination organs and fluids; application to stromata of red blood cells and serum, A., III, 56.

Thatte, V. N., and Joglekar, M. S., Raman spectra of some acid chlorides, A.,

and Thosar, B. V., Raman spectra of acid bromides, A., I, 549.

Thau, A., low-temperature carbonisation of bituminous coal in conjunction with gasworks, B., 103. German coking practice, B., 404. Low-temperature carbonisation of bituminous coal in Germany, B., 405. Low-temperature coke ovens, B., 744. Synthesis of benzine by the Bindley process, B., 750. Modern technique of benzol recovery, B., 864. Mechanical devices for gasworks, B., 1154. Scrubbers for coal gas and coke-oven gas, B., 1154.

See also Vater, G.
Thayer, C. H. See Houdry Process Corp. Thayer, S. A., MacCorquodale, D. W., and Doisy, E. A., cestrogenic activities of synthetic phenanthrene compounds and oxidation products of theelol, A., III,

Thaysen, A. C., origin of earthy or muddy taint in fish. I. Nature and isolation of taint, A., III, 34.

and Pentelow, F. T. K., origin of earthy or muddy taint in fish. II. Effect on fish of taint produced by an odoriferous species of Actinomyces, A., III, 34.

Thaysen, T. E. H., ten cases of idiopathic steatorrhoea, A., III, 463.
Theaman, H. See Putt, E. B.

Theel, P., [anticorrosive] coating composition, (P.), B., 1375.

Theimer, E. T., and Ameringen-Haebler, Inc., van, synthetic production of alcohols, (P.), B., 760.

Theiner, L., automatic mixing and fine-

grinding roller mill, (P.), B., 993.

Theis, E., Döbereiner's catalytic researches, A., I, 153.

Theis, E. R., chrome tanning. II. Effect of neutralisation on combined sulphate and basicity of the leather, B., 950.

and Schaffer, E. J., aldehyde tannage, B., 267.

Serfass, E. J., and Weidner, C. L., chrome[-tanning] liquors. VI. Properties of chrome-tanning extracts, B., **817.**

and Weidner, C. L., chrome[-tanning] liquors. VI. Reduction of potassium dichromate by sucrose, A., I, 577.

Theis, K. See Enders, C. Theisinger, W. G., heat effect of welding, B., 575.

Theissing, H., properties of radiation detectors, with special reference to thermoelements, A., I, 479.

Thelen, E., measurement of rheological properties of materials of great consistency such as asphalts, B., 516.

Thelen, H., dependence on urea of "residual nitrogen-difference" in blood and urine, A., III, 53. Calcium content of plasma and serum, A., III, 165.

Thellier, E., magnetisation of ignited earths; intensity of the terrestrial magnetic field in the past, A., I, 205. "Permanent" magnetisation of basalts, A., I, 382. Disappearance of permanent magnetisation of baked clays, by reheating in zero magnetic field, B., 1205.

Themlitz, R. See Blanck, E.
Theobald, G. W., effect of calcium and vitamins-A and -D on incidence of pregnancy toxemia, A., III, 301.

Theodore, J. J. See Spencer-Strong, G. H.Théodoresco, (Mlle.) M., Raman effect of two complex molybdotartrates in water, A., I, 394.

Theodorov, P. See Motschan, I.
Theophilus, D. R., Hansen, H. C., Snyder,
R. S., Wood, R. E., and Olmstead, R. L., effect of various phases in manufacture of casein by natural sour method on its physical and chemical properties, B., 181.

Theorell, H., physiological re-oxidation of reduced yellow enzyme, A., III, 69. Free protein component of the yellow enzyme and its coupling with lactoflavinphosphoric acid, A., III, 314. "Unmodified porphyrin-C," A., III,

and Norlin, G., highly purified diphtheria antigen, A., III, 454.

Thermal Industrial & Chemical (T.I.C.)

Research Co., Ltd., Chadder, W. J., Spiers, H. M., and Arnold, E., emulsification of tars, (P.), B., 644.

Thernell, C. O., froth-producing apparatus [for fire-extinguishing], (P.), B., 858. Theron, J. J., and Louw, J. M., comparison

of hydrometer and International methods for determining clay content of South African soils, B., 1249.

Theuer, A. U., effect of temperature on the stress-deformation of concrete, B., 443.

Theuerer, H. C. See Schuh, A. E. Theumann, M. J., and Du Pont Rayon Co., [low-lustre] artificial silk, (P.), B., 430.

Thevenet, S. See Achard, C Thévenot, L. See Arloing, F. Thewalt, J. See Dilthey, IV.

Thewlis, J., double thread structure of human tooth-enamel, A., I, 351. Crystal orientation in tooth-enamel, A., III, 118.

Thews, E. R., pyrometry in smelting works and foundries, B., 245. Recovery of [secondary] battery scrap and residues by metallurgical processes, B., 360. Melting and casting of aluminium bronzes, B., 570.

and Snelling, R. W., case-hardening in cyanides; B., 245.

Thibaudet, M. A. See Meyer, P.
Thiberge, N. F., histamine and typhoid
protein in control of asthma and hay fever, A., III, 122.

Thiel, A., lecture experiment on electro-capillarity, A., I, 101. Interpretation of osmosis and osmotic pressure, A., I, 302. Characteristic symbols in light absorption, A., I, 493

Thiel, E. See Frank, K. Thiel, G. A. See Grnner, J. W. Thielacker, W., structure of the guanidinium ion compared with borates, carbonates, and nitrates, A., I, 554.

Thiele, E. W. See Bahlke, W. H., and Rogers, M. C.

Thiele, H_{\cdot} , salt formation and base exchange of graphitic acid, A., I, 457.

Thiele, W. See Schiel, E.

Thielepape, E., and Fulde, A., perchloroethylene distillation for rapid and accurate determination of water in [beet-]sugar factory products and other materials, B., 1114.

Thiemer, E., atomic-arc ("Arcatom") process and its application to the welding of aluminium and aluminium alloys, B.,

1223.

Thier, W. See Neber, P. W. Thierer, C. See Jenckel, E.

Thies, \hat{H} . R. See Wingfoot Corp.

Thiesmeyer, L. R., vein quartz pseudo-morphs of cross-fibre asbestos in Virginia, A., Î, 431.

Thiess, L. E., characteristics of steatite bodies, B., 1205.

Thiessen, G., fusain content of coal dust from an Illinois dedusting plant, B., 636. Coke from Illinois coal; temperature conditions in sole-flue ovens, B., 860.

Thiessen, P. A., fundamental system of organic micelles, A., I, 79.

and Herrmann, K., preparation of very pure conductivity water, A., I, 91, 145. and Schoon, T., electron diffraction at

natural faces of organic single crystals, A., I, 502. Electron diffraction apparatus and its application to the determination of the internal potential of ionic crystal lattices, A., I, 536.

and Schütza, H., relation between fine structure of crystal surfaces and structure of reaction layers formed on

them, A., I, 400.
Thiessen, R. See Fieldner, A. C.
Thieulin, G. See Verge, J.

Thilo, E., and Schünemann, H., silicates. IV. Behaviour of pyrophyllite, Al₂(Si₄O₁₀)(OH)₂, on heating and the existence of an anhydrous pyrophyllite, Al₂(Si₄O₁₀)O. V. Nature of reaction products of pyrophyllite with molten magnesium and cobalt chlorides, A., I, 206, 256.

Thimann, K. V., auxins and growth of roots, A., III, 241.

and Haagen-Smit, A.J., effects of salts on emergence from the cyst in protozoa, A., III, 485.

Thiodet, and Ribère, blood-protein equilibrium in malaria and anaphylactic

shock, A., III, 89.

Thiokol Corporation, plastic materials derived from mercaptans and mercaptides, (P.), B., 1239, 1372. Plastic materials derived from organic polysulphides, (P.), B., 1372.

Thiollais, R., and Perdreau, H., cacodylates

of zinc, A., II, 489. Thivolle, L. See Fontès, G. Thode, H. G. See Urey, H. C.

Thöenes, D., origin of asphaltic bitumen, B., 202.

Thömke, K. See Schmitz-Dumont, O. Thoeni, M. See Dorner, W.

Thoma, M., purification of [town's] gas, B.,

Thomae, E., microchemical determination of phosphoric acid and calcium in food chemistry, B., 1127. See also Jesser, H.

Thomas, A., recovery of tin from tin scrap (P.), B., 457.

Thomas, A. J., and Greenhill, W. L. determination of moisture content of timber by electrical capacity effects: new meter and its application, B., 1345.

Thomas, A. V., possibilities of open-tank impregnation of Kempas and other timbers in Malaya, B., 916.

Thomas, A. W., and Cohen, Benjamin, catalytic decomposition of hydrogen peroxide by aluminium oxyiodide hydrosols, A., I, 192.

and Miller, H. S., basic beryllium and complex beryllate hydrosols; polyolated and polyoxolated structures, A.,

I, 132.

See also Thurman, B. H.

Thomas, B., composition and feeding value of some moorland plants, B., 184. Composition and feeding value of heather at different periods of the year, B., 390.

and Boyns, B. M., composition of grass laid up for winter keep, B., 615.

See also Moon, F. E. Thomas, B. H. See Cannon, C. Y., Culbertson, C. C., and Eck, J. C. Thomas, C. A., and Dayton Synthetic

Chemicals, coating composition, (P.), B., 947.

Hochwalt, C. A., and Monsanto Petroleum Chemicals, protective coating, (P.), B., 947.

Hochwalt, C. A., and Talbott, N. S., artificial ageing of whisky, (P.), B., 77. and Monsanto Petroleum Chemicals, [nonfrosting] protective coating composi-tions [from tung oil], (P.), B., 265. Prepared resin, (P.), B., 945. Prepared [synthetic] resin, (P.), B., 945. Protective coating material, (P.), B.,

and Soday, F. J., resins from cracked distillates; dispersing and wetting properties, B., 60.

Thomas, C. L. See Egloff, G.

Thomas, D. L., and Gasoline Products Co., coking hydrocarbon oil, (P.), B., 645. Thomas, E. B. See Brit. Celanese.

Thomas, E. E., reclamation of white alkali soils in the Imperial valley, B., 593. Reclamation of black alkali soils with various kinds of sulphur, B., 593.

Thomas, E.L. See Shepard, H.H.Thomas, F. L., control of cotton flea hopper, B., 74.

Thomas, Heinz. See Fromherz, H., and Sonderhoff, R.

Thomas, Henry. See Pew, A. E., jun. Thomas, H. A., development of latent finger-prints with dyes, B., 622. Dyes for developing latent fingerprints, B., 1137.

Thomas, H. A., jun., "slope" method of evaluating constants of first-stage biochemical oxygen demand curve, B., 847.

Thomas, H. H., production and utilisation of domestic coke; production of domestic coke in gasworks, B., 103.

Thomas, I. H. See Davies, R. M. Thomas, I. M., diastase in rabbit saliva, A., III, 57.

Thomas, J., liberation of combined por-

phyrin by photolysis, A., III, 295. Thomas, J. C. See Nicholls, L. C. Thomas, J. E., yield and quality in the Zanto current with special reference to cineturing and tipping, B., 1387. Manufacture of jelly powders, B., 1402. Thomas, J. E., and Barnard, C., fruit-bud studies. III. Sultana: relations between shoot growth, chemical composition, fruit-bud formation, and yield, A., III, 366.

Thomas, J. G., recovery and treatment of

sludge, (P.), B., 850.

Thomas, J. H., physical characteristics and properties of textile materials made from

glass, B., 781.
Thomas, J. L., electrical-resistance elements and [chromium-gold] alloys therefor, (P.), B., 1075.

Thomas, K., and Akao, A., a-guanidoglutaric acid, a possible precursor of creatine A., II, 403.

Thomas, L. C. See Dobbins, J. T. Thomas, M. See Schaefer, Wilhelm. Thomas, M. D., and Amer. Smelting &

Refining Co., automatically measuring

traces of gases, (P.), B., 742. and Hill, G. R., relation of sulphur dioxide in the atmosphere to photosynthesis and respiration of lucerne, A., III, 501. Continuous measurement of photosynthesis, respiration, and transpiration of lucerne and wheat growing under field conditions, A., III, 501.

Thomas, O. See Hinkel, L. E.

Thomas, P., detection and determination of copper by colour reactions, A., I, 633.

Thomas, R. E. See Dn Pont de Nemours & Co., E. I.

Thomas, R. H. A., soap, (P.), B., 258. Thomas, R. M. See Sabin, F. R.

Thomas, Robert M. See Standard Oil Development Co.

Thomas, R. P., use of rapid soil tests in the United States, B., 706. See also Bartlett, J. B.

Thomas, S. L. S. See Linstead, R. P. Thomas, T. K. See Dowzard, E.

Thomas, Walter, mathematical expression of equilibrium between nitrogen and phosphoric acid in plants, A., III, 80. Properties of hydroxyl groups of clay as a basis for characterising a mineral soil, B., 163. Distribution and condition of potassium in a differentially fertilised Hagerstown clay loam soil planted to apple trees in cylinders, B., 273.

Thomas, William, and Pneumercator Co., viscosity regulator, (P.), B., 100.

Thomas, William (Portheawl), and Davies, E. L., electrolytic hydrogenation of carbonaceous material, (P.), B., 1009.

Thomas, W. M. See McBain, J. W. Thomas & Co., Ltd., R., Kieft, A. W., Mehl, E., and Smetana, O., coatings of tin or tin alloys on [copper or ferrous] metal articles, (P.), B., 357. Coatings of tin on metal articles, (P.), B., 457. Thomassen, L. See Mikulas, W.

Thomer, G., scattering of X-rays at neonlike molecules and at benzene, A., I,

Thomis, G. N., acidimetric determination

of sodium monomethyl- and dimethylarsenates, A., II, 10.

Thompson, A. E. See Standard Oil Co. Thompson, A. J., and Globar Corp., silicon carbide resistors, (P.), B., 140.

Sec also Carborundum Co. Thompson, A. R., and Food Machinery Corp., [wax] product for coating fruit,

(P.), B., 839. Thompson, A. R. F. See Herbert, W. E.

Thompson, C. L., and Parmelee, C. W., effect of heat-treatment on thermal expansion of some silica-alumina glasses, В., 1204.

Thompson, C. P. See Moe, L. H. Thompson, D. D., Raman spectra. II. Monomethoxy-derivatives of ethyl benzoate, A., I, 345.

Thompson, E. C., and Fleming, R. S., determination of moisture in powdered milk by the toluol distillation method, B., 1122.

Thompson, F. B. See Aston, B. C. Thompson, F. S. See Corhart Refractories

Thompson, H. W., and Healey, N., spectrum and photochemistry of carbon

suboxide, A., I, 110. and Linnett, J. W., absorption spectra and photochemistry of polyatomic molecules containing alkyl radicals. V. Vibration frequencies and structure, A., I, 442. Photochemistry of polyatomic molecules containing alkyl radicals. VI. Photolysis of mercury dimethyl, A., I, 472. Spectrum and molecular structure of carbon suboxide, and evidence for hybrid links, A., I, 494. Force constants and molecular structure. II. Ethylenc. III. Molecules containing C:O and C:C linkings. V. Relation between force constant and bond length, A., I, 500.

and Meissner, M., inhibitions of organic decompositions by nitric oxide, A., I,

468.

See also Linnett, J. W.

Thompson, J., effect of intake of calcium on blood-iodine level, A., III, 212.

Thompson, J. G., Vacher, H. C., and Bright, H. A., determination of oxygen in steel, B., 681.

See also Cleaves, H. E.

Thompson, J. H. N., fusion-welded pressure vessels, B., 1283.

Thompson, J. L., diurnal variation of

cosmic-ray intensity, A., I, 5.

Thompson, J. M. C. See Clow, A.

Thompson, J. W. Sce Bailey, C. R.

Thompson, K. W., augmentary factor in animal sera after injections of pituitary extract, A., III, 185. Non-specificity of thyrotropic antihormone, A., III, 187. and Cushing, H., inhibition of action of

pituitary hormones by animal sera,

A., III, 73.

Thompson, M. de K., metal colouring, B., 48. Thompson, M. R., comparison of pharma-cological syndromes of ergometrine and ergotoxine group of ergot alkaloids, A., III, 478.

See also Goldstein, S. W., Hunt, W. H.,

and Rosen, H.

Thompson, R. See Meyer, Karl.

Thompson, R. A. See Bray, P. D. Thompson, R. B., effect on egg quality of five different vegetable proteins, B., 1400.

and Albright, W. P., yolk colour of eggs from hens fed various foods and pigments, B., 1400.

See also Kohler, E. P., and Penquite, R. Thompson, R. H. See Cope, O.

Thompson, R. R., effect of storage on the activity of papain, A., III, 429.
Thompson, S. O., Beamish, F. E., and

Scott, M., determination of gold and platinum and detection of platinum metals, A., I, 581. See also Lloyd, B. A.

Thompson, W. B. See Davies, W. M. Thompson, W. C. See Brennan, J. J.

Thomsen, A. M., utilisation of sugar-cane

bagasse, (P.), B., 229. Thomsen, L. C., cold storage of butter, B., 180. Plant refrigeration systems, B., 987. Thomson, A. K. G., entrainment in a bubble-cap distillation column, B., 989.

Heat transmission in film-type coolers, B., 1284.

Thomson, D. L. See Collip, J. B. Thomson, G., solvent effect in dielectric polarisation. I. Polarisations of nitrobenzene and chlorobenzene in certain ethers. II. Positive solvent effect of butyl and amyl ethers, A., I, 507.

Thomson, G. P., and Saxon, J. A., attempt to detect radioactivity produced by

positrons, A., I, 161.

Thomson, G. S., grading of butter and cheese, B., 612.

Thomson, H. G., ceramic kilning and making building units, (P.), B., 1053.

Thomson, J., sparking potentials at ultra-high frequencies, A., I, 104. Thomson, J. S., and Simpson, G., pn of

forest soils in vicinity of Dunedin, New

Zealand, B., 163. Thomson, K. B., and Duffendack, O. S., source for quantitative spectrographic

analysis of solutions, A., I, 581. and Lee, W. C., spectrographic determination of sodium, potassium, calcium, and magnesium in biological fluids, A., III, 334.

See also Duffendack, O. S.

Thomson, M. L. See Jenkins, C. E.
Thomson, R. H. K. See Askew, H. O.
Thomson, T. See Brassert & Co., H. A.
Thomson, T. A., coloroscopic investigations, A., I, 328.

Thomssen, E. G., [toilet] emulsions, B., 624. Thoreau, J., Breckpot, R., and Vaes, J. F., monazite of Shinkolobwe (Katanga), A., I. 155.

Thorington, C. H., use of oil for dustproofing coke at Springfield [U.S.A.], B.,

Thorley, N., and Whiddington, R., molecular excitation potentials of water vapour, A., I, 215.

Thom, F. C., and Bowman, C., determination of evaporation rate of solvents at

high temperatures, B., 116.

Thorn, G. W., creatine studies in thyroid disorders, A., III, 42. Effect of adrenal cortical hormone on renal exoretion of electrolytes in normal subjects, A., III, 320.

Garbutt, H. R., Hitchcock, F. A., and Hartman, F. A., effect of cortin on renal excretion and balance of electrolytes in humans, A., III, 121. Effect of cortin on sodium, potassium, chloride, inorganic phosphorus, and total nitrogen balance in normal subjects and in patients with Addison's disease, A., III, 400. Effect of cortin on renal excretion of sodium, potassium, chloride, inorganic phosphorus, and total nitrogen in normal subjects and in patients with Addison's disease, A., III, 400.

and Harrop, G. A., "sodium-retaining effect" of the sex hormones, A., III,

Thornburg, V. E. Sec Gensamer, M. Thorne, B., and Myers, C. N., unusual cutaneous symptoms associated with retention of arsenic, B., 733.

Thorne, C. B. See Irwin, J. P.

Thorne, D. W., Neale, O. R., and Walker, R. H., physiology of Rhizobium. VIII. Respiratory quotient, A., III, 273.

and Walker, R. H., physiology of Rhizo-bium. VII. Effects of accessory growth factors, A., III, 99.

Thorne, R. S. W., assimilation of nitrogen from amino acids by yeast, B., 965. Thorne, W. F., crystallisation of concen-

trated [ammonia] liquor, B., 106. and Lane, I. J., effects of changes in

composition on combustion of town gas, B., 639.

Thornes, L. S. See Newitt, D. M. Thornhill, R. S., and Evans, U. R., atmospheric rusting and descaling of steel, B.,

Thornton, C. R. See Dickson & Mann, Ltd. Thornton, H. R., modified methylene-blue reduction technique [for milk], B., 1122.

Thornton, J. J. See Cerecedo, L. R. Thornton, M. K., jun., press-room operation as it affects quality of cottonseed,

oil, B., 939. Thornton, R. L., radioactivity produced in

nickel by deuteron bombardment, A., 1, 439. Artificial radioactivity induced in arsenic, nickel, and cobalt under deuteron bombardment, A., I, 491.

See also Cork, J. M., and Pool, M. L. Thornton, S. F., "root solubility" of essential elements in soil as an indication of availability, B., 1099. and Kraybill, H. R., determination of

available potash in fertilisers, B., 956. Thornton, W. M., jun., maintenance of correct values on laboratory weights, A., I, 428.

and Christ, C. L., diphenylguanidinc as a standard in neutralisation processes, A., I, 475.

and Smith, J. G., support for perforated platinum crucibles, A., I, 202. Thorpe, V., refining quality of raw sugars in

Queensland, B., 174.

Thorpe, W. V., and Williams, R. T., receiver changer for small-scale vacuum distillations, A., I, 380. Glucovanillin and a colorimetric reaction for vanillin, A., II, 195.

Thorsen, K. A., and Ateliers Neyret-Beylier, machine for grinding, washing, or otherwise treating fibrous materials, (P.), B., 993.

Thosar, B. V. See Thatte, V. N.

Thron, H. See Johannessohn, F.
Thrum, W. E., test paper for aluminium,
A., I, 426.

Thuesen, D. G., and Egyptian Lacquer Manufg. Co., cuticle remover, (P.), B.,

Thuillot, (Mllc.) M. L. See Giroud, A. Thum, E. E., aluminium die-casting alloys, B., 796. Ductile zinc coating deposited on [steel] wire by electrolysis, B., 797.

Thun, R., solubility of [soil] potassium and phosphates in boiling water, B., 269. Determining nutrient values of soil and their value in practical agriculture, B., 376. Value of soil examination, especially systematic nutrient control, by the seedling method, B., 707.

Thunaeus, H., growth, selection, and malting qualities of barleys in northern

countries of Europe, B., 966.

Thunberg, T., dehydrogenases of human placenta, A., III, 219. Effect of heavy water on enzymic dehydrogenation, A., 111, 427.

Thuret, uso of photo-clootric comparator in determination of small quantities of arsenic by the Bougault method, A., I,

B. H., Thomas, A. W., Mattikow, M., and Refining, Inc., oilproofing of material [paper], (P.), B.,

Sco also Refining, Inc.

Thurnauer, H., Alsimag 196—a new coramic insulating material for high-frequency purposes, B., 440.

Thurston, A. M., application of gas radiant tubes to heating of galvanising furnaces,

Thurston, J. T., and Shriner, R. L., salts of nitro-compounds. I. Preparation, alkylation, and acylation of salts of phenylnitroacetonitrile, A., II, 490.

Thurston, L. M., oxidation in relation to off-flavours in milk and certain milk products, B., 1121. Oxidised flavour in milk, B., 1399.

See also Brown, W. C.

Thurston, R. R., constituents of asphaltic materials versus accelerated weathering, B., 1056.

and Cummings, C. E., machino for testing ductility of bituminous substances, B., 867.

See also Texas Co.

Thury, G. See Kiss, A. von.

Thyssen, H., and Bonhomme, W., sulphur in steel and cast iron, B., 559.

and Maréchal, J. R., application of potentiometric methods in the study and predetermination of the corrosion of ferrous alloys, B., 1352.

Tian, A., and Gand, E., ionic dissociation of alkyl halides, A., I, 411.

Tiashelova, T. P., technique of measuring swelling, A., I, 153.

Tibbenham, L. J., welding or brazing of ferrous and non-ferrous metals and rods therefor, (P.), B., 692.

Tibbetts, D. M. See Aub, J. C. Tibbits, G. C. See Olsen, F. Tibeau, M. E., time factor in utilisation of mineral nutrients by hemp, A., III, 236. Tice, L. F., and Batt, W. G., electrophoretic behaviour of gelatin-protected

silver halide sols, A., I, 182. See also Osol, A.

Ticehurst, A. G. See Summerson & Sons,

Tichomirov, A. See Drinberg, A.

Tiehomirova, A. M., and Efremov, N. N., viscosity of the systems phenol-ethyl- and -diethyl-aniline, A., I, 356. See also Efremov, N. N., and Vino-

gradova, A. D. Tichomolov, P. A., and Drushinin, A. E., oxidation of acetylene-y-glycols; 3:4diketo-2:2:5:5-tetraphenyltetrahydrofuran, A., II, 298.

See also Favorski, A. E.

Tichonov, A. V., and Korzinkina, J. V., concentration of nitric acid by means of phosphoric acid, B., 339.

Ticknor, A. A. See Klipstein, K. H. Tide Water Oil Co. See Bailey, D. P., and

Rembert, E. W. Tidmus, J. S., and Parkinson, D., applications of the microscope to rubber technique, B., 1091.
Tidwell, A. C. See Nachlas, A.

Tiedjens, V. A., and Schemmerhorn, L. G., available calcium [in soil]: a factor in salt balance for vegetable crops, B., 268. Tien, C. H. See Sah, P. P. T.

Tien, P. Y. See Yü, H. A.

Tien, Y.L. Sco Chuang, C.K.Tierney, F.P. Sco Brennan, J.J.Tiffeneau, M., and Barclay, H., effect of decreased temperature on production of anæsthesia by propyl bromide and the anæsthetic content of guinea-pig's brain, A., III, 390.

and Broun, D., effect of temperature on the production of anæsthesia by propyl bromide and the anæsthetic content of the brain of the gudgeon

maintained at 12—25°, A., III, 390. and Gutman, (Mlle.) J., molecular rearrangement in the cyclic hydrocarbon series; isomerisation of epoxides derived from 1-benzyl-4-methyl-41-cyclohexene and 1-benzylideno-4-methyl-

cyclohexane, A., II, 22. and Weill, P., sulphuric [acid] de-hydration of divinyl glycol; hydrobenzoin type of rearrangement with migration of the vinyl group, A., II,

225.

Weill, P., and Tchoubar, (Mlle.) B., addition of hydracids to the epoxides, and hypohalogenous acids to the ethylenic derivatives, methylenecyclohexane, and methylcyclohexene and their opoxides, A., II, 414. Iso-merisation of methylenecyclohexane oxide to hexabydrobenzaldehyde and deamination of the corresponding amino-alcohol to cycloheptanone, A., II, 414.

Tiggelen, A. van. See Mund, W. Tijn, M. van. See Clay, J.

Tikka, J. See Virtanen, A. I.

Tiktina, A. M. See Terpugov, S. V. Tilemann, T., electrically welded temper cast iron and its after-treatment, B., 558.

Tilenschi, S. See Radulescu, D. Tilevitsch, E., Poliatzkina, B., and Glikina, M., chemical stability of phenol plastics,

B., 698. Tilitschenko, M. N., accelerating action of ketones on the Camizzaro-Tischtschenko

reaction, A., II, 368. Till, F. G., precipitation from a gaseous medium of oil or other substance

suspended in a mist-like manner, (P.), B., 742.

Tilleard, D. L., colour scales for oils and varnishes, B., 806. Colorimetry of pigments; testing, B., 809.

Tilley, C. E., paragenesis of kyanite-eclogites, A., I, 154. Pyroxmangite from Invernesshire, Scotland, A., I, 431. Paragenesis of kyanite-amphibolites, A., I. 585. Wollastonito solid solutions from Scawt Hill, Co. Antrim, A., I, 585. Tilley, J. N. See Du Pont de Nemours & Co., E. I.

Tilley, R. G., coiled-tube heat exchangers,

(P.), B., 991. Tillmann, M. Sco Gärtner, K.

Tillmanns, H. E. See Hempel, M. Tillotson, E. W. See McGregor, R. R. Tilly. See Paget, M.

Tilton, L. W., representation of refractive index of distilled water as a function of wave-length, A., I, 115.

and Taylor, John K., representation of refractivity and density of distilled water as a function of temperature, A., I, 222.

Timakov, V. D., and Dodonov, M. N., thermostability of vaccine virus, A., III, 488.

Timken-Detroit Axle Co. See McQuaid, H.W.

Timken Roller Bearing Co. See Hildorf, W. G.

Timm, W. B., ore dressing and metallurgy, Jan.-June, 1935, B., 449. Investigations in oro dressing and metallurgy, B., 1063.

Timmermans, (Mlle.) A. M. See Pinkus, A. Timmermans, J., internal constitution of non-ideal solutions; demixing and complex formation, A., I, 457.

and Bodson, H., surface tension of water

and heavy water, A., I, 446.
Timmers, J. C. See Goudswaard, A.
Timmis, G. M. See Smith, Sydney, and Wellcome Foundation, Ltd.

Timms, A. G. See Gonnerman, H. F.
Timofeev, P. V., and Kondorskaja, N. S.,
fatigue of oxygon-casium photocathodes, A., I. 114.

and Piatnitzki, A. I., secondary emission of an oxygen-cæsium electrode, A., I, 221. See also Afanasieva, A. V., Kvartschava, I., and Piatnitzki, A. I.,

Timofeeva, F. F. See Demidenko, T. T. Timoshenko, G., controlled cathode sput-

tering, A., I, 480.
Timoshuk, D. Seo Leipunski, A. I.
Timperley, W. A., Naish, A. E., and Clark,
G. A., hæmophilia, A., III, 58. Tinbergen, J. C., and Vloodt, van der, red

pigment occurring in sugar cane with Seroh disease, A., III, 245.

Tincker, M. A. H., growth-substances, root production, and cambial activity in woody cuttings, A., III, 330. Growthsubstances or hormones, and rooting of cuttings, B., 170.

See also Kögl, F. Tingley, G. R. See Gilbert, A. H.

Tinker, C., crop-drying apparatus, (P.), B., 1405.

Tinker, J. M. See Du Pont de Nemours & Co., E. I.

Tinley, N.L. See Vickers, V.R.S. Tinzel, T. See Saito, M.

Tiollais, R., cacodyl compounds, A., II, 371. Tipper, G. H., vanadium-bearing magnetite deposits of Dhalbum and Mayurbhanj, Biliar, India, B., 133.

Tipson, R. S., acridine salts of "yeast" and "muscle" adenylic acids, A., II, 468. See also Levene, P. A.

Tiquet, R., slimes in electrolytic baths, B., 1068.

Tiratzujan, S. M. See Bastanshian, A.K.Tirumalachari, N. C. See Ayyar, V. R.

Tischer, J., micro-colorimetric determination of potassium in plant ash, A., III,

Tischtschenko, D. V., aliphatic chloro-derivatives. I. Chlorination of trimethylethylene. II. Allylic isomerisation of isopentenyl chlorides. VI. Reactivity of polychlorides of the allyl type. IX. Inductive effect and order of substitution of hydrogen by chlorino atoms in saturated hydrocarbons and their chloro-derivatives, A., II, 2, 82,

and Schtschigelskaja, M., aliphatic chloro-derivatives. X. Action of chlorine on Δ^{α} - and Δ^{β} -pentenes, A., II, 364.

and Tschurbakov, A., aliphatic chloroderivatives, III. Chlorination of αβand By-dichlorobutanes. VII. Chlorination of sec.-butyl chloride. VIII. Chlorination of a-chlorobutane, A., II, 82, 316,

See also Davidova, M., and Gutner, R.

Tischtschenko, F. E., and Lukasch, I. K., physico-chemical properties of aluminium-silver alloys containing much aluminium, A., I, 607. Structure of aluminium-silver alloys, A., I, 608.

See also Petrenko, G. I.

Tischtschenko, V., and Grechnev, M., determination of camphor, A., II, 40. Catalytic preparation of camphor from borneol and isoborneol, B., 1308.

and Raines, M. M., analysis of cyanide melt, B., 1043.

and Ridalevskaja, M. D., humic acids of different soil types, B., 70.

Tiscowitz, R. See Fliederbaum, J. Tisdale, W. H. See Du Pont de Nemours

& Co., E. I.

Tiselius, A., electrophoretic analysis of colloidal mixtures, A., I, 305. Elec-trophoresis of serum-globulin. I. II. Electrophoretic analysis of normal and immune sera, A., III, 111, 371.

Pedersen, K. O., and Eriksson-Quensel, I. B., ultracentrifugal sedimentation by the Toepler "Schlieren" method,

A., I, 332.

Tisher, H. L., and Lee, C. O., precipitation in fluid extract of Uva ursi. I. Crystallino nature of precipitate, B., 1267.

Tislowitz, R., l-ascorbic acid and cholestorol metabolism, A., III, 154. Ascorbic acid and function of the adrenal cortex, A., III, 188. Effect of vita $min-B_1$ and -C on persistence of Congored in the blood stream, A., III, 325. Synergism and antagonism of vitamins, A., III, 439. and Kurowski, J., effect of vitamins-A

and -D on the plasma content of cir-

culating blood, A., III, 325. Tisza, E. T. See Renshaw, R. R.

Tisza, L., pair production in β -decomposition, A., I, 388.

Titan Co., Inc., titanium dioxide, (P.), B., 909. Hydrated titanium compounds, (P.), B., 1202.

Titanges. m.b.H., pure titanium nuclei for use in production of titanium pigments, (P.), B., 263.

Titani, T. See Koizumi, M., Morita, N., and Okabe, K.

Titanite Alloys Corporation. See Bates, J, B.

Titanium Alloy Manufacturing Co. See Comstock, G. F., and Kinzie, C. J.

Titanium Pigment Co., Inc., hydrated titanium compounds, (P.), B., 437. See also McCallum, J., and Schmidt, C. L.

Titoff, V., Müller, H., and Reichstein, T. synthesis of benzfuran-2-carboxylic acid and -2-acetic acid, A., II, 512.

Titov, A. I., action of nitrogen peroxide on benzene, toluene, and chloro-benzene. II. III. Nitration by means of nitrogen peroxide in presence of aluminium chloride, PCl₃, and mercuric nitrate. IV. Nitration by means of nitrogen peroxide of benzaldehyde and of nitro-derivatives of benzene, toluene, and chlorobenzene, A., II, 182, 331.

and Barischnikova, A. N., action of nitrogen peroxide on benzene, toluene, and chlorobenzene. I. Nitration in presence of sulphuric and phosphoric acids, A., II, 182. Velocity of acetylation of aromatic aminosulphonic acids, A., JI, 237.

See also Voroshcov, N. N.

Titov, E. F., variation of magnetic anisotropy of iron with temperature, A., I,

Titova, A. S. See Osipov, V. N.

Titova, J. G., effect of adsorption of ions from solution on determination of zinc and of sulphate ion in zinc sulphate, A., I, 47.

Titterton, F., filters, (P.), B., 4, 99.

Tittsler, R. P., fermentation of acetylmethylcarbinol by the Escherichia-Aërobacter group and its significance in the Voges-Proskauer reaction, A., III, 357.

and Sandholzer, L. A., bacteriostatic action of indole on Gram-negative enteric bacilli and certain cocci, A., III, 148. Fermentation of cellobiose by bacteria, A., III, 224.

Sandholzer, L. A., and Callahan, E. T., bacteriostatic action of skatole on Gram-negative enteric bacilli, A., III,

Titus, A. C., silica and silicate solubilities, A., I, 233.

Titus, H. W., Byerly, T. C., Ellis, N. R., and Nestler, R. B., effect of packinghouse by-products, in diet of chickens, on production and hatchability of eggs, B., 83.

See also Heywang, B. W.

Titz, I. N., desulphurising paraffin and shale oils under atmospheric pressure, B., 749.

Bergo, G. J., dehydrogenation catalysis of condensed ring hydro-

carbons, A., II, 285. and Juriev, J. K., catalytic desulphuris-ation of Ischimbaev petroleum products under atmospheric pressure; desulphurisation in presence of 20, 40, and 60% Ni catalysts, B., 1004.

Plate, A. F., and Gluschnev, N. F.,

catalytic desulphurisation of Ischimpetroleum products atmospheric pressure; desulphurisation of kerosene fractions in a stream

of pyrolysis gas, B., 1004.

Tiulenev, V. N. See Kravtschenko, N. A.

Tiulin, A. T., availability of soil phosphates for the plant from viewpoint of colloid

chemistry, B., 165.

Tiulpina, A. F. Sec Opotzki, V. F.

Tiutiunnikov, B., and Kasjanova, N., stability of [sodium] perborate in washing powders, B., 132. Hydrolysis of soap in dilute aqueous solutions, B., 365.

Sobol, A., and Erschova, V., caper spurge-seed oil, B., 366.

Sobol, A., and Trotzki, J. A., toxicity of chelidonium oil, and its removal, B., 392.

Tjabbes, B. T., gum formation in [town's] gas, B., 405.

Tkatschenko, E. S., reduction of dehydroascorbic acid by lactic acid bacteria, A., III, 155.

Tkatschenko, Z. P. See Gorschtein, G. I. Toaff, R., relationship between gastric administration of glucose and hyperglycemia produced, A., III, 174. Effect of sodium dithiodipentanedicarboxylate on experimental hyperglycamia, A., III1, 291.

Tobacco By-Products & Chemical Corporation. See Moore, W.

Tobey, J. A., acid and alkali forming foods, A., III, 17. Milk preventing mottled enamel in teeth, A., III, 171. Milk pasteurisation, B., 833.

Tobie, W. C., and Ayres, G. B., synthesis of dl-alanine in improved yield from a-bromopropionic acid and aqueous ammonia, A., II, 280.

Tobler, F., theory and illustrations of the cottonising of flax and hemp, B., 1032.

Tobler, W. See Ottensooser, F. Toby, G. See Bachman, C., Collip, J. B., and Hartman, F. A.

Tocantins, L. M., physico-chemical changes in blood in experimental thrombopænic purpura, A., III, 302.

Tocco, G., and De Bartholomaies, E., higher aliphatic alcohols, B., 414.

and Rossi, C., bituminous emulsions in the paper industry, B., 332. Sizing paper with emulsions of free resin, B., $\bar{3}3\bar{2}$.

Tochowicz, L., tryptophan and histidine in blood in Biermer's anæmia; aminoacids in blood in Biermer's anæmia or anæmia following hæmorrhage, A., III, 298.

Tod, C. W., boiler water conditioning, B., 399.

Tod, H. See Jones, M. S.

Toda, H. See Kosaka, Y.

Todd, A., cheese weight problems, B., 281. Todd, A. R., and Bergel, F., aneurin. VII. Synthesis of aneurin, A., II,

Bergel, F., Fraenkel-Conrat, H. L., and Jacob, (Miss) A., aneurin. Synthesis of thiochrome and related compounds, A., II, 37.

Bergel, F., Karimullah, and Keller, Rudolf, thioformylation of amines, A., II, 186.

Bergel, F., Waldmann, H., and Work, T. S., constituents of vitamin-Econcentrates from rice- and wheatgerm oils, A., III, 440.

See also Bergel, F., Hems, B. A., and Raistrick, H.

Todd, F., determination of ethyl alcohol by a capillary-rise method, A., II, 82.

Todd, H. [with Hamblin, F. T.], correction to be applied to the results obtained by using a Geiger counter, A., I, 635.

Todd, J. See Russell, A.
Todd, J. D., May, J. E., Newbury, W. L.,
and Sherwin-Williams Co., azo-dyes [pigments], (P.), B., 1027.

Todd, J. W., and Rowntree & Co., articles of food or confectionery, (P.), B., 391. Todd, S. S., and Parks, G. S., heat of fusion of stannic iodide, A., I, 21.

See also Parks, G. S. Todd, W. See Imperial Chem. Industries. Todd Co., Inc., safety paper, (P.), B., 130. See also Smith, B. W.

Todes, O. M., theory of thermal explosions. I. Thermal explosion for reactions of "zero" order, A., I, 189.

See also Appin, A. Todhunter, E. N., factors influencing ascorbic acid content of apples, A., III, 79. Comparison of heated casein with extracted casein in the basal diet for determination of vitamin-A, A., III,

Todrick, A., and Walker, E., thiol groups in proteins, A., II, 130. Combination of cysteine with allylthiocarbimide, A., II, 139.

Tödt, F., continuous measurement of $p_{\rm R}$, A., I, 266. Theory of corrosion phenomena due to oxygen dipolarisation, B., 928.

See also Spengler, O.

Toennies, G., preparation of permono-phosphoric acid, A., I, 258. Permonosulphurie acid in organic media, A., I, Relations of thiocarbamide, cysteine, and the corresponding disulphides, A., II, 403. Oxidation products of cystine and related compounds, (P.), B., 1135.

and Elliott, M., polarimetric determination of water in acetic acid, B.,

647.

Tönuis, B. See Kögl, F. Toffoli, C., waters of Eritrea, A., I, 203. Toi, V. B., and Akabori, S., pyrrole deriv-

atives, A., II, 386.
Toishi, A. See Miwa, T.
Tokar, P. T. See Bezugli, D. V.
Tokarev, N. V., and Nekrassov, N. I., ignition and self-inflammation of ammonia and of nitrogen-hydrogen mixtures, A., I, 247.
Tokareva, F. A. See Freidlina, R. C.
Tokarevski, P. See Rappoport, E.

Tokmanov, V. E., and Rodzaevskaja, V. D., petrolatum problems in Russia in connexion with new sources of raw material and new refining methods, B., 111.

Tokuno, Y. See Sakurada, I.

Tokuoka, Y., koji-amylase. I.—VI. and
IX., A., III, 67, 96, 269, 354.

Tokuriki, S. See Nishizawa, K.

Tokuyama, S., and Nakahara, W., influence of diets containing proteins of various fishes on growth of tumour in rats. II. and III., A., III, 12. Effect of diets containing various fish eggs on growth of tumour in rats, A., III, 299. Influence of diets containing proteins of various Arthropoda on growth of tumours in rats, A., III, 299.

Tolansky, S., and Lee, E., fine structure in arc spectrum of platinum, A., I,

272.

Toledo Hospital. See Steinberg, B. Toledo Scale Manufacturing Co. See Marshall, C. O.

Tollenaar, D., pseudo-binary fusion diagram of monomeric and dimeric di-hydroxyacetone, A., I, 82. Tollert, H. See D'Ans, J. Tolmatschev, J. M. See Larionov, J.,

and Lindtrop, M.T.Tolmatschev, V. See Kartschagin, V.Tolonen, F.J., experimental beneficiation of Michigan iron-bearing formations, B., 1211. Heavy fluid separation, B., 1354. Tolotschko, I. P., evaluation of activated

carbons, B., 681.

Tolpin, J. G. See Cerecedo, L. R. Tolpina, M. I., partial pressures of [gas]

solvent vapours, B., 9. Tolstoi, D. M. See Volarovitsch, M. P. Tolstoi, E., relation of blood-glucose to concentration of lactose in milk of lactating diabetic women, A., III, 205.

Tolstoouhov, A. V. See Ostromislensky,

Tolstoplet, A. Y., requirements in water and fertilisers for accumulation of nicotine in some types of Nicotiana rustica cultivated in irrigated fields in the lower Volga region, B., 825.

Tomalin, E., floeculation of coal slurries, B., 1292.

Tomaschek, R., and Mehnert, E., fluorescence of gadolinium salts and their solutions, A., I, 345.

See also Deutschbein, O., and Gobrecht, H. Tomaschov, N. D. See Akimov, G. V.Tomasello, S. J. See Grower, R. M.

Tomes, J., polarographic studies with the dropping mercury cathode. LXIII. Verification of the equation of the polarographic wave in the reversible electrodeposition of free cations. LXIV. Equations of current-voltage curves in the reversible electro-reduction of a weak electrolyte, Hg(CN)₂. LXVII. Equation of the polarographic wave in the electrodeposition of hydrogen from strong and weak acids, A., I, 188, 310, 365.
Tomesco, T. G. See Fabre, R., and

Janot, M. M.

Tomhave, A. E., and Mumford, C. W., ground soya beans as a protein supplement for laying birds, B., 185.

Tomiček, O., and Kubik, J., mercurometric titration of nitroprusside, A., I, 580. and Poupě, F., tellurium electrode, A., I, 83.

Tomilov, V. I. See Platonov, M. S.

Tominaga, H., and Okamoto, G., spectroscopic studies of reaction flames. I. Reaction flame of acetylene and halogen. II. Reaction flame of mercury and halogen, A., I, 622.

Tominaga, I., effect of guinea-pig organs on perfused, isolated rabbit lung, A., III, Effect of papaverine hydrochloride and sodium nitrate on perfused, isolated rabbit lung, especially one altered by

histamine, A., III, 27.
Tomita, M. See Kondo, H.
Tomiyasu, Y., determination of acetoin, A., II, 443. Determination of $\beta \gamma$ -butyleno glycol, A., II, 530. Carboligase, A., III, 97. Carboligase and the optical properties of the reaction product, A., III, 431.

Tomkins, R. G., action of organic acids on growth of moulds, A., III, 432. Treated wraps for prevention of rotting [of fruits], B., 1264.

and Dreyer, D. J., brown markings on S. African citrus fruits, B., 836.

See also Haines, R. B. Tomlinson, F. W., use of metals in the papermaking industry, B., 1188.

Tomlinson, G. H., jun. See Buckland, I. K., and Hibbert, H.

Tomlinson, (Miss) M. L., condensation of picryl chloride with 4-methylthiazole and benzthiazole, A., II, 36.

Tomlinsons (Rochdale), Ltd., Shepherd, A., and Clegg, R. R., drying of paper or fibre boards, etc., (P.), B., 1325.

Tommasi, G., fertility of soils and its determination, B., 1384. Agrarian evaluation of the Sila, B., 1386.

and Marimpietri, L., p_H of calcareous soils, B., 594.

Tommila, E. See Kurenniemi, T.

Tomonaga, S., kinetic nuclear energy in the Hartree-Fock model, A., I, 546. and \mathbf{U} meda, K., exchange integral, \mathbf{A} ., \mathbf{I} ,

See also \mathbf{U} meda, K.

Tomonari, T., spinning of rayons, B., 1034. and Nagai, S., inner structure of artificial

fibres, B., 655.
Tompa, H. See Redlich, O.
Tompkins, C. A. See Haynes, E. Tompkins, D. H. See Magoun, G. L.

Tompkins, L. E., effects of certain fertilisers on carbon dioxide intake of mature Jonathan apple leaves, B., 169. Tompsett, R. S., composition for laying of

hard tennis courts, etc., (P.), B., 1346. Tomski, H. W., and Waller, L. J., sterilisation of aqueous solutions of sodium phenobarbitone, B., 1406.

Tonegutti, M., stabilising power of various compounds compared by means of the tests of Taliani and of Thomas, B., 396. Heat of explosion of penta-erythritol tetranitrate and of trimethylenetrinitroamine, B., 396.

and Brandimarte, E., application of the Lécorché-Jovinet test to examination of modern powders containing cen-

tralite, B., 396.

Tongas, P., empirical expression for specific volume of superheated water vapour, A., I, 71. Empirical expression for total heat of superheated steam, B.,

Tongberg, C. O., Fenske, M. R., and Nickels, J. E., composition of a Yates

gasoline, B., 204. Lawroski, S., and Fenske, M. R., packing material for fractional-distillation columns, B., 1286.

Nickels, J. E., Lawroski, S., and Fenske, M. R., fractional distillation of cracked and "polymer" gasolines, B., 869. See also Lawroski, S., and Quiggle, D.

Tongeren, H. van, dust collector, (P.), B., 402. Installations for removing dust from dust-laden air, fine gases, and so

forth, (P.), B., 996.
Tongeren, W. van, measuring spectral negatives and increasing sensitivity of spectral analytical methods, A., I, 378.

Toni, G., spontaneous decomposition, and that due to sterilisation, of solutions of hexamethylenetetramine for injection,

Tonks, L., complete equation of state of one-, two-, and three-dimensional gases of hard elastic spheres, A., I, 71. Drift of ions and electrons in a magnetic field, A., I, 338.

Tonn, W., mechanism of wear in shorttime tests on pure metals, B., 1219.

Tonnelat-Baudot, (Mme.) M. A., relation between action function and force acting on the electron, A., I, 109.

Tontscheff, L., floor tiles, B., 1340.
Toole, E. See Andreadis, T.
Toole, S. G., and Sowa, F. J., ester form-

ation and structural relationships, A., II, 481.

Tootal Broadhurst Lee Co., Ltd., Foulds,

R. P., and Bazzocchi, A., artificial wool, (P.), B., 229.

Foulds, R. P., and Marsh, J. T., treatment [delustring and weighting] of textile materials, (P.), B., 1332.

Topham, C. F. See Courtaulds, Ltd.
Topley, W. W. C., Raistrick, H., Wilson,
J., Stacey, M., Challinor, S. W., and
Clark, R. O. J., immunising potency of antigenic components isolated from different strains of B. typhosum, A., III,

Toporec, A., mechanism of formation of atomic and colloidal centres of silver in alkali halide phosphors, A., I, 441.

Toporescu, E., action of sulphur on silver, A., I, 371.

Topps, J. E. C. See Lawson, A.

Toptschiev, K. S., and Pavlova, L. N., synthesis of decamethylenebisguanidine (synthalin), A., II, 329.

Toraishi, S., and Ouchi, I., measurement of density with a float, A., I, 379. Toral, (Senorita) T. See Moles, E.

Torboli, A., chemical constitution and physiological action. I. Hydro-aromatic compounds, A., III, 479.

Torchet, P. J. M., and Comp. de Prod. Chim. & Electromét. Alais, Froges & Camargue, recovery of gases [hydrogen fluoride] and dust evolved in electrolytic manufacture of aluminium, (P.), B., 359.

Torda, C., eserine and muscular function. III. Heat-contraction, total acid-soluble phosphorus, and phosphagen in eserchised muscle, A., III, 391. See also Martini, E.

Torelli, L. See Dechigi, M.

Torgashina, Z. I., cracking of kerosene in presence of catalysts, B., 108.

Torigian, J., and Drug Products Co., [therapeutic] colloidal copper solution, (P.), B., 89. Therapeutic composition [colloidal metal preparations], (P.), B., 291. Digitalis preparation, (P.), B., 1273.

Torii, T. See Shibuya, K.
Torikata, R., and Fukutomi, H., typespecificity of heat-extractive antigens. II. Formation of antibodies in the lungs by means of the intrapulmonary injection of coctigens, especially of tubercular antibodies, A., III, 294.

Toriyama, Y., and Shinohara, U., electric breakdown field intensity of water and

aqueous solutions, A., I, 283.
Torotscheschnikov, N. S., production of ethylene in the fractionation of cokeoven gas by intense refrigeration, B., 863.

See also Juschkevitsch, N. F

Torrance, C. C., effect of diphtheria toxin on vitamin-C in adrenals of guinea-pigs, A., III, 188. Effect of diphtheria toxin on vitamin-C in vitro, A., III, 496.

Torrance, J. R. See Carrnthers, C. Torrance, S., electrolytic analysis of white and yellow metal alloys, B., 1353.

See also Fife, J. G. Torrance & Sons, Ltd. See Carruthers, C. Torrey, H. C., sign of magnetic moment of the ³⁹K nucleus, A., I, 210, 492.

Torrey, J. P. See Graham, Robert. Torricelli, A., identification and determination of traces of nickel in fats hardened by hydrogenation, B., 1078. Loss of essential oils from spices stored in

ordinary packing material, B., 1133.

Torrington Manufacturing Co., fluid-reaction apparatus, (P.), B., 1150.

Torrini, A. See Slavich, E. Torstensson, G., and Eriksson, S., determination of porosity of soil, B., 269.

Torsuev, I. I. See Gindin, L. G.

Toschev, G. See Tritonov, I.
Tosterud, M. See Aluminum Co. of America.

Tostmann, J., and Walter, F., modern [electric] smelting furnaces, B., 1229.

Toth, S. J. See Prince, A. L. Totman, C. C. See Olson, T. M.

Tougarinoff, B., determination of small amounts of arsenic in tin, A., I, 425. Toultchinskaia, K. Z. See Schmidt, A. A.

Tour, S., magnesium-base alloys, B., 355. Tournade, A., and Chevillot, M., influence of eserine on secretion of adrenaline caused by stimulation of the splanchnic nerve and by intravenous in-

jection of acetylcholine, A., III, 135. Sarrouy, C., and Chevillot, M., acetylcholine and adrenaline secretion, A., III, 93. Is the nicotine-like action of acetylcholine due solely to hypersecretion of adrenaline? A., III, 93.

Tournaire, A., 2700 A. absorption bands of chlorine compounds in aqueons solution, A., I, 216.

Tournaire-Vassy, (Mme.) A., relative measurement of the absorption coefficients of ozone in the region of Chappuis' bands, A., I, 342.

Tourville, W. J., regenerative open-hearth furnace system, (P.), B., 738.

Tousey, R., optical constants of fluorite in the extreme ultra-violet, A., I, 69.

Toussaint, G. See Ichok, G. Toussaint, R., and Pinte, J., determination of the light-fastness of pigments and dyes, B., 881.
Toussaint, W. J. See Union Carbide &

Carbon Corp.

Tovarnickii. See under Tovarnitski.

Tovarnitski, V. I., and Rivkind, T. L.,
hormonisation of seeds—a possible agro-technical process, B., 1103.

See also Guberniev, M.A.Toybin, M. V., thermodynamics of irreversible processes, A., I, 309.

Towle, L. W. Sco Nugent, R. L.
Towndrow, R. P. See Partington, J. R.
Towne, C. C. See Texaco Development Corp., and Texas Co.

Townend, D. T. A., and Chapman, E. A. C., influence of pressure on spontaneous ignition and limits of inflammability of ether-air mixtures, A., I, 313.

See also Kane, G.P.

Townend, F. See Speakman, J. B.
Townley, R. W., and Whitney, W. B. [with
Felsing, W. A.], solubilities of barium and strontium carbonates in aqueous solutions of alkali chlorides, A., I,

Townsend, A. A. See Burhop, E. H. S. Townsend, J. S., equations of motion of

electrons in gases, A., I, 209. Townsend, L. W. E., stabilisation of lubricating oils, etc., (P.), B., 323.

Townsend, S. R. See Pijoan, M. Toyama, T. See Kuwada, S. Toyama, T., isomerides formed in course

of hydrogenation of crucic acid, A., II, 440. Unsaturated acids of tohaku oil, B., 1366.

and Ishikawa, Tokuzo, dihydroxy-stearic acid in castor oil, A., II, 48. Esters of castor oil fatty acids. I .-- IV., A., II, 366.

and Tsuchiya, T, highly unsaturated acids in sardine oil. XII. Separation of octadecatrienoio acid $C_{18}H_{30}O_2$. XIII. Oxidation of methyl clupanodonate with potassium permanganate in acetone. XIV. Oxidation of potassium clupanodonate with potassium permanganate in aqueous solution, Ā., II, 47.

and Uozaki, K., presence of octadecatrienoic acids in seed-oils of pomegranate, karasu-uri (Trichosanthes cucumeroides), and balsam pear, A., III, 445.

Toyuyama, S., and Nakahara, W., influence of diets containing proteins of various molluses on growth of tumours in rats, A., III, 122.

Trabucchi, E., anæsthetic action of alkaloids of Erythrophlæum, A., III, 390. Determination of ergonovine [ergometrine] in ergot preparations, B., 1132.

Trace, J. See Barbour, H. G., and Smith,

Trachtenberg, A. M., and Tatarski, I. A., metallurgical stoppers and nozzles, B.,

Trachtenberg, D. M. See Levina, R. J. Track, L. K. See Stokes, W. E.

Tracy, P. H., milk products for ice-cream mix, B., 1123.

and Ramsey, R. J., factors causing cream

to whip poorly, B., 1399.

Traders, Ltd., T. D. See Dexter, A. D. Trager, W., nutritional requirements of mosquito larvæ (Aedesaegypti), A., III, 80. Trambauer, R. See Voigt & Haeffner A.-G.

Tran, M. A., and Benninghoff, W. E., differential hardening [of steel] by induction [heating], B., 1352.

Trapeznikova, O., and Miljutin, G., specific heat of dry manganous chloride, A.,

and Schubnikov, L. V., specific heats of the anhydrous salts FeCl₂, CrCl₃, CoCl₂, and NiCl₂, A., I, 124. Schubnikov, L. V., and Miljutin, G., specific heat of anhydrous chromic

chloride, cobaltous chloride, and nickel chloride, A., I, 124.

Trapp, K. See Daeves, K.

Trask, P. D., origin of oil as indicated by composition of organic constituents of sediments, A., I, 538.

Tratteur, P., change of molecular refraction of alcohol with concentration in benzene, A., I, 180 .

aube, W., and Kuhbier, F. [with Schröder, W.], metallic complox salts of Traube, W., aliphatic polyhydroxy-compounds, A., II, 48. Autoxidation of complex metallic compounds of gluconic acid, A., II, 49.

Traubenberg, H. R. von, and Adam, H., production of spaces with high neutron concentration, A., I, 58. Back-scattering of neutrons and production of spaces with high noutron concentration, A., I, 161.

Traulsen, H., pica in Schleswig-Holstein cattle: cause and prevention, B., 838. Trauth, F., and Bässler, K., relation between density and alcohol content of musts and its application to improvement of musts, B., 606.

Trautmann, A. See Oppermann, T. Trautmann, G. See Windaus, A. Trautmann, S. Seo Ambard, L.

Trautteur, P., [1, 2] band and predissociation of the call level of the second

positive group of N_2 , A., I, 485. Trautz, M., and Holtz, J. D., [thermite type of] combustion reactions, A., I, 420. Travatex Products Corporation.

Cleghorn, A. E. Traver, A. E., and Socony-Vacuum Co., comparative [transmission] colorimeter, (P.), B., 1150.

Travers, A., structure of Portland and aluminous cements and their set products, B., 552. Nitrogenous and phosphatic fertiliser industry, B., 1250. Constitution of quenched slag used in blast-furnace slag cements, B., 1344.

and Clause, F., detection and determination of calcium aluminates in hydraulic

products, B., 1345.

Travers. M. W., thermal change in gaseous organic compounds, A., I, 86. Thermal decomposition of ethane, ethylone, acetaldehyde, etc., A., I, 366. Thermal decomposition of propane-propylenehydrogen equilibrium mixtures, A,. I, 366. Composition of the mixture of rare gases from the hot springs of Bath, A., I, 584. Nitric oxide and alkyl ethers, A., II, 365. Recent investigations on thermal changes in simple organic compounds, A., II, 437. and Silcooks, C. G., thermal decomposition of ethylene oxide, A., I, 466. Travers, M. W. See also Carter, A. G., Gay, P. F., Nat. Smelting Co., and Seddon, R, V.

Travin, A. I. Sco Magidson, O. J.

Travniček, M., cement phosphors, A., I, 550. Traxler, R. N., influence of the solid [component] on flow properties of dilute [mineral loading] suspensions, B., 736.

and Baum, L. A. H., permeability of compacted powders; determination of average pore size, B., 195.

and Coombs, C. E., colloidal nature of asphalt as shown by its flow properties, B., 314. Development of internal structure in asphalts with time, B.,

and Pittman, C. U., penetration-viscosity relationship for asphaltic bitumens, B., 516.

and Schweyer, H. E., rheological properties of asphalts. III. Viscosity index, B., 202.

Schweyer, H. E., and Moffatt, L. R., viscosities of liquid-solid systems; influence of dispersed particles, B., 640. See also Coombs, C. E.

Traylor Engineering & Manufacturing Co.,

pulveriser mills, (P.), B., 510.

Treadwell, W. D., and Ammann, A., thermodynamics of solubility and crystal hydrate formation of the alkali

halides, A., I, 82.

Ammann, A., and Zürrer, T., free energy of formation of magnesium oxide and magnesium chloride, A., I, 82. and Leutwyler, F., hexamctaphosphoric acid, A., I, 628.

and Vontobel, H., titration of nitric acid and its esters in concentrated sulphuric acid, A., I, 425.

Trebler, H. A. See Johnson, A. H., and Roland, C. T.

Trechletov, K. F. See Goltzschmidt, V. A. Treer, R. See Müller, Adolf.

Trefethen, J. M., Lincoln sill, A., I, 587. Treffers, H. P., rates and mechanisms of inorganic reactions, A., I, 246.

and Hammett, L. P., cryoscopic studies on bases in sulphuric acid: ionisation of di-ortho-substituted benzoic acids,

A., I, 563.

Tréfouël, J., Tréfouël, (Mme.) J., and
Dunant, Y., resolution of diethylaminomethylbenzdioxan (883 F), A., II, 112.

Tréfouël, (Mme.) J., Nitti, F., and Bovet, D., chemothorapy of p-aminophenylsulphonamide derivatives in streptococcal infections, A., III, 99. See also Fourneau, E.

Tréfouel, (Mme.) J. See Fourneau, E., and Tréfouël, J.

Tréhin, R., application of physical methods to investigation of complexes in solution, A., I, 29.

Treiber, H. See Wolf, C.

Treibs, W., sulphonic acids of terpenes and sesquiterpenes. I. cycloPulegenolsulphonic ester and its transition into menthofuran, A., II, 109. Addition of alcohols at double linkings. I. Addition of alcohols to carvone and dihydrocarvone. II. Ethers from unsaturated cyclic hydrocarbons and from the two pinenes, A., II, 157, 296. Cedrene. II. Methyl-oxidation of cedrene by selenious acid to primary cedrenol and to codrenal, A., II, 509. Treichel, O., flask oven, A., I, 48.

Treichler, R., Grimes, M., and Fraps, G. S., relation of colour and carotene contents of butter fat to its vitamin-A potency, A., III, 43.

See also Fraps, G. S.

Trelease, H. M. See Trelease, S. F. Trelease, S. F., and Trelease, H. M., immunity of cortain insects to selenium poisoning, A., III, 351.

See also Pratt, R.

Treloar, A. E. See Markley, M. C. Treloar, L. R. G., secondary-electron emission from complex surfaces, A., I,

Tremblay, J. L., properties of the silver electrode and titration of total and active chlorine ion in organisms, A., I, 96. Tromearne, T. H. See Jacob, K. D.

Trendelenburg, R., structure and properties of spruce and other pulp woods, B., 25. Ring width and summer wood content of pulp wood, B., 141.

and Schaile, O., resin in coniferous woods, I., B., 893.

Trenner, N. R., thermal conductivity method for determination of isotopic exchanges in the simpler gaseous molecules, A., I, 479. Gas density balance for determination of absolute density of protium-deuterium mixtures and other gases, A., I, 480. Thermal conductivity method for determination of isotopic exchanges in the simpler gaseous molecules, A., I, 581.

Morikawa, K., and Taylor, H. S., reactions between atomic deuterium and saturated aliphatic hydrocarbons, A., I, 313.

See also Morikawa, K.

Trent, W. R. See Whitmore, F. C.

Trenzen, C., and Astron Akt.-Ges., treatment of the [tungsten] filaments of incandescence electric lamps, (P.), B., 255. Treon, J. F. See Fry, H. S.

Tress, H. J. See Drew, H. D. K.

Tressler, D. K., Mack, G. L., Jenkins, R. R., and King, C. G., vitamin-C in vegetables. VII. Lima beans, A., III, 326.

See also Fenton, F., Gould, S., Mack, G. L., and Pederson, C. S. Treszczanowicz, E. See Bakowski, S., and

Sosnowski, S.

Tretiakov, G. N. See Tschapek, M. V. Tretiakova, E. W. See Peretz, B. G. Tretolite Co. Seo De Groote, M., and Stehr, C. N.

Treu, M. See Fischer, F.

Treub, J. P., gradual separation and economy. III. and IV., B., 400, 508. Treusch, O. See Zintl, E.

Trevithick, H. P. See Smither, F. W. Trevy, P., yellowing of celluloid in light, B., 767. Polymerisation of mixed vinyl resins, B., 944. Cellulose acetate mould-

ing compositions, B., 1369.

Trew, (Miss) V. C. G., diamagnetic susceptibility of thallium compounds, A.,

See also Spencer, J. F.

Tria, E., relation between temperature and activity of the glycogenolytic enzyme of liver of poikilothermic animals, A., III, 221. Enzymic activity and surface tension; action of some surfaceactive substances on pancreatic lipase, A., III, 311. Action of sodium salts of organic acids on pancreatic lipase, A., III, 429. See also Kraut, H.

Tribby, W. W., and Carmichael, E. B., cellulase from the slug, Limax flavus, Linnæus, A., III, 67.

Triché, H., spark-spectrum study of the corrosion of alleys, B., 794.

Triebel, H. See Schenk, P. W. Triem, G. See Holtz, P., and Langenbeck, W.

Triendl, E. See Straub, W. Trier, E., determination of ascorbic acid in serum by the methylene-blue reaction, A., III, 327.

Trifonov, I., Mirev, D., and Toschev, G., electrical laboratory tube furnace with granulated carbon (kryptol) resistance heating for high temperatures (1600°), A., I, 427.

Trikojus, V. M., and Drummond, J. C., isolation of carotene from a wood oil, A., III, 331.

See also Lambie, C. G., and Loeser, A.

Trillat, J. J., transformations produced in certain metals by heating in vacuo, in inert gases, or in air, B., 1356.

and Fritz, R., X-ray study of orientation of fatty acids on graphited surfaces; applications to lubrication, A., I, 350. and Hautot, A., behaviour of a bundle

of monokinetic electrons after penetrating an absorbing foil, A., I, 541. and Mérigoux, R., liberation of silver in

photographic emulsions, A., I, 370. and Motz, H., action of light and of electrons on silver halides, A., I, 317.

and Oketani, S., transformations produced in metals by heating in a vacuum or in air, A., I, 67. Modifications and transformations of metals on heating in a vacuum or in different gases. I. and II., A., I, 289.

Oketani, S., and Miyake, S., electronic analysis: oxidation of Au-Cu alloys, A., I, 605. and Vaillé, R., adsorption of oils in

relation to lubrication, B., 206. Trimbach, H. Sco Magne, H.

Triple-A-Specialty Co. See Eden, H. W. Triplett, T. A., X-rays and γ-rays, B., 582.

Triplex Safety Glass Co., Ltd., Waine, A. C., and Wilson, John, polymerisation of polymerisable hodies, (P.), B., 263. Synthesis of esters of methacrylic acid, (P.), B., 877.

and Wilson, J., uniting cellulose acetate and gelatin layers [in safety glass manufacture], (P.), B., 1324.

Triploil Manufacturing Co., Inc. See Crowley, H. G.

Tripp, F. See Holmes, A. D.

Trischmann, H. See Kuhn, R.
Trister, S. M., and Hibbert, H., carbohydrates and polysaccharides. LII. Preparation, separation, and identification of the isomeric propylidene-, isobutylidene-, tert.-amylidene-, and dibromoethylidene-glycerols, and general pro-

perties of glycerol cyclic acetals, All, 84.

Tristram, G. R. See Channon, H. J.

Trivedi, S. A. See Tawde, N. R.

Trobeck, K. G. See Bergström, H.

Trobridge, G. W. See Dunfop Rubber Co.,

and Internat. Latex Processes.

Trochain, J., graphic representation of the results of physical and granular analyses of soil, B., 1096.

Troitzkaja, M. I. See Lurie, J. J. Troitzkaja, N. B. See Ravitsch, M. I. Troitzki, M., and Blagovestschenski, N., influence of a decision of the second seco influence of admixtures on the vacuum distillation of β -naphthol, B., 1018.

Troitzki, V., "caseinic acid" in tissue culture, A., III, 390.

Trojan Powder Co. See Wyler, J. A.

Trombe, F., magnetic properties of the rare metals, A., I, 229. Metallurgy of the rare-earth metals, B., 50. See also Bouchonnet, A.

Trommer, W. See Dreisch, T.

Tromp, F. J., and Duming, J. P., average error in coal sampling, B., 859.

Tromp, K. F., assessing coal preparation, B., 743.

Tromp, L. A., massecuite circulation and vacuum-pan design, B., 483.

Tronev, V. G., solubility of noble metals at high pressures. I. Solution of platinum metals in hydrochloric acid under air pressure, A., I, 509. Displacement of platinum metals from solutions of their salts by hydrogen at high pressures, A., I, 518.

Tronstad, L., hardenable light-metal alloys, B., 797.

Tropp, C., and Eckardt, B., sphingomyelin in Niemann-Pick disease, A., III, 56, 124.

and Hofmann, Albin, determination of porphyrins in urine, A., III, 378.

Seuberling, O., and Eckardt, B., microdetermination of phosphorus in cerebrospinal fluid, A., Ill, 297.

See also Brdička, R.

Tropp, H. J., oil from Peganum harmala, B., 807. Oils from Althwa officinalis and Malva arborea, B., 807. Ükrainian St. John's bread, B., 840. Ukrainian St. John's bread, and conditions affecting its toxicity during preservation, B., 840.

Tropper, H., fluctuation phenomena in liquid crystals, A., I, 555.

Tropsch, H. See Universal Oil Products Co. Troschtschenko, A. T. Sce Nilov, V. I.

Trost, A., vapour-filled Geiger-Müller counters, A., I, 341.

Trost, F., hydroxytriterpene acids from Somali incense. I., A., II, 382. Dehydrogenation of abictic acid and detection of colophony and its derivatives in varnishes. I., B., 1088.

and Debelli, V., Congo copal resin. II. Copal oil, B., 60.

and Doro, B., fatty acids of egg oil, A., Ill, 415.

Trostel, L. J., refractories for the steel industry, B., 782.

Trotski, J. A., and Tschvidkovski, E. G., thermal expansion of steels from 20° to 900°, B., 45.

See also Tiutiunnikov, B., and Vinokurov, S. I.

Trott, temperature measurements in rotary kilns, B., 851.

Trouillas, L. See Révol, L.
Trout, G. M. See Sharp, P. F.
Trout, W. E., jun. See Frazer, J. C. W.

Trow, R. F. See Texas Co.
Trowbridge, E. A. See Black, W. H.
Troxel, S. M., relative humidity nomograph, A., I, 583. Troxell, G. E. See Davies, R. E.

Troy, H. C., and Sharp, F. F., mercuric chloride as a milk preservative, B., 488.

Trpinac, P. See Reich, W. S. Trpišovská, M. See Bureš, E.

Tru Colour Film, Ltd., colour photography, (P.), B., 1277.

and Reindorp, J. H., colour photography or kinematography, (P.), B., 1278.

Tru Colour Film, Ltd., and Sanders-Dolgoruki, E., colour photography or kinematography, (P.), B., 983. Photographic material for colour photography or kinematography, (P.), B., 983.

Sanders-Dolgoruki, E., and Reindorp, $J.\ H.$, colour photography or kinematography, (P.), B., 1278.

Truax, T. R., Harrison, C. A., and Baechler,

R. H., fireproofing of wood, B., 916. Trubenkov, V., service of silica brick in open-hearth furnaces of the Pctrovski

plant at Dnepropetrovsk, B., 782. True, I. J., dustproofing coke with cold oil spray, B., 861.

Trübestein, H. See Küstner, H. Truesdail, J. H. See Schoepfle, C. S.

Truesdale, E. C., Wilcox, R. L., and Rodda, J. L., zinc-rich portion of the system iron-zinc, A., I, 177.

Trufanov, A. V., preparation of pure vitamin-B₁ and -B₂ (flavin), together with ergosterol, from yeast, A., III, 153.

Truffert, L. See Kohn-Abrest. Truffl, G. See Jacchia, L.

Truhaut, R., colour reactions of dinitrobenzenes in alkaline solution, A., II, 182. Action of mercuric oxide on glycine in an alkaline medium, A., II, 328. Combinations of glycine and alanine with mercuric oxide, A., II, 371.

Truka, J. See Ernst, E.

Trumble, H. C., and Shapter, R. E. associated growth of herbage plants. II. Influence of nitrogen and phosphorus treatment on yield and chemical composition of Wimmera rye grass and subterranean clover. III. Yield and nitrogen content of a perennial grass (Phalaris tuberosa), B., 1252.

and Strong, T. H., associated growth of herbage plants. I. Nitrogen accretion of pasture grasses when grown in association with legumes, B., 1252.

Trummer, J. See Margules, V. Trump, J. G. See Dunlap, G. C.

Trumpy, B., structure of cosmic ultra-radiation. III., A., I, 390.

Trunel, P., electric moments of aliphatic dinitriles, A., I, 499.

Truog, E., availability of essential soil elements—a relative matter, B., 1099.

Taylor, J. R., jun., Pearson, R. W.,
Weeks, M. E., and Simonson, R. W.,
mechanical and mineralogical soil analysis, B., 1096.

Taylor, J. R., jun., Simonson, R. W., and Weeks, M. E., mechanical and mineralogical subdivision of the clay separate of soils, B., 1096.

Truschina, E. See Leonteev, H. Truschka, R., separation of low-temperature carbonisation gases by compression and low temperature, B., 201.

Trusty, A. W. See Pierce, R. B.
Truszkowski, R., and Zwemer, R. L., determination of blood-potassium, A., III, 192.

See also Zwemer, R. L.

Try-Chalons, accelerated annealing of black-grain cast iron, B., 558. Tryller, H., starch acidity, B., 381.

Tryon Viscoster Corporation. See Blanchard, A. F.

Trzebiatowski, W., determination of lattice constants of diamond and graphite, A., I, 287. Rhenium and carbon, A., I, 577. Trzebniak, F. See Suszko, J. Tsai, B. See Bizette, H.

Ts'ai, L. S. See Lo, T. S.

Tsao, C. N. See Cheng, F. W.

Tsao, E. T., determination of tellurium in organic compounds, A., II, 476.

Tsao, U., graphical methods as applied to continuous countercurrent extraction of solids by liquids, B., 988.

Ts'ao, Y. Y., and Ko, F. M., new reagent for detecting nitrous acid in drinking water, A., I, 375.

Tsatsas, G., oil from resin of Pistacia terebinthus, A., III, 332.

Tschachrov, L. See Gurevitsch, M. M. Tschagovetz, R., effect of work and training on oxidation-reduction potential of muscle tissue. III. Changes in potential of muscles during training and work due to influence of acid and alkaline diet. IV. Redox potential and $p_{\rm H}$, A., III, 16, 126.

Tschahovitsch, X., Berovitsch, R., and Vitschnitsch, M., spleen and carbohydrate metabolism, A., III, 476.

Tschajanov, N. A., and Nemtzova, Z. N., influence of admixtures on polymerisation of butadiene in presence of sodium, A., I, 315.

Tschajlachjan, M. C., hormonal theory of plant development, A., III, 49, 444. and Jarkovaja, L. M., hormonal theory

of plant development. II., A., III,

Tschali, V. P. See Plotnikov, V. A. Tschapek, M. V., Mosgovoi, A. A., and Tretiakov, G. N., hydrophilic colloids. II. Hydration energy; hydration in solutions of sucrose and sodium sulphate, A., I, 240. See also Dumanski, A. V.

Tscharova, A., and Dundur, E. I., determination of manganese in ores and in ferromanganese by Volhard's method, using marble in place of zinc oxide, B., 685.

Tschartova, C. A. See Tschulkov, J. I. Tschassovenni, V. See Butkov, K.

Tschavdarov, D., use of the reaction between formaldehyde and alkali hydrogen sulphite in oxidimetry; oxidimetric determination of iron, A., I, 532.

Tschebotarev, I. I., geothermal stages and chemistry of artesian waters of N.

Daghestan, A., I, 430.

Tscheburkov, A. K., isothermic transformation of austenite in alloy steels, B., 680. Tschelincev, G. V., and Osetrova, E. D., amide condensations; condensation of organic compounds by means of alkali metals, A., II, 58. Amide condensations; benzoylacetone from acetdiphenylamide and acetophenone, A., II, **154.**

Tschelincev, V. V., disposition and inclination of rows of molecules in layers of organic acids according to X-rays, A., I, 502. Oxonium compounds; complexes of quinones with hydrochloric, phosphoric, and acetic acids, and their chlorination, A., II, 200. Structure of organo-magnesium complexes, A., II, 312. Shales of Lower Volga and

their investigation, B., 107.
[with Larionov, A. S.], "furanic" condensations. VII. Preparation of alcohols of the furan series by means of ethereal or individual organomagnesium compounds and their transformation into unsaturated substances and

resins, A., II, 298.

Tschelischtscheva, A. G. See Kurnakov,

N. S.

Tschelzova, $M.\ A.\$ See Petrov, $A.\ D.\$ Tschepelevetzki, $M.\ L.$, phosphate analysis; free acidity of superphosphate, B., 1043.

and Boltz, C., solubility of sodium silicofluoride in aqueous phosphoric acid, and its salting out by sodium chloride, A., I, 560.

Tschepinoga, O. P. See Soreni, E. T. Tscherbov, S. I., and Tscherniak, E. L., determination of specific heat of powdered aluminium hydroxide and sodium oxalate, A., I, 557.

Tscherenkov, P. A., angular distribution of intensity of luminescence excited in pure liquids by γ -rays, A., I, 220. Visible luminescence of puro liquids under influence of hard β -rays, A., 1, 220. Visible radiation produced by electrons moving in a medium with velocities exceeding

that of light, A., I, 546.

Tscherkasskaja, P. M. See Preis, E. M.
Tscherkasski, A. See Voroshoov, N. N. Tscherkassov, V. P. See Kirsanov, A. V. Tscherkes, A. I. See Rozovska, E. S.

Tscherkes, L. A., alimentary constituents (alitoxins) and their pathological effects, A., III, 218.

and Dukler, N. D., proteinogenous toxicosis. III. Rôle of vitamin-B complex in processes of detoxication, A., III, 43.

Tschernak, K. See Nikiforov, M. Tschernaschkin, V. J. See Vladimirski,

Tscherniaev, I. I., internal sphere of complex compounds, A., I, 397.

and Babaeva, A. V., oxidation of cis and trans bivalent platinum nonelectrolytes by nitric acid, A., I, 96.

and Fedorova, A. N., ring fission in complex platinum compounds, A., I,

and Gelman, A. D., ethylene compounds of platinum, A., I, 630. Isomerism of ethylene compounds of platinum, A., II, 54.

and Goremikin, V. I., hydroxylamine pyridine compounds of bivalent platinum, A., I, 475. Oxidation of hydroxylamine compounds of platinum, A., I, 475.

and Plakan, J. J., reaction between ammonium salts and cobaltinitrite complexes, A., I, 633.

See also Krasikov, S. E.Tscherniaev, V., and Vuks, M., spectrum of the twilight sky, A., I, 158.

See also Frisch, S. Tscherniak, $A.\ I.$ See Feinschmidt, O. Tscherniak, $E.\ L.$ See Tscherbov, $S.\ I.$ Tscherniak, $M.\ I.$ See Levina, $R.\ J.$

Tscherniavskaja, A. D. See Raschevskaja,

Tscherning, K. See Butenandt, A. Tschernitzkaja, R., and Kargin, V. A., chemical reactions between colloids of the same sign. I.—III., A., I, 615.

Tschernojarova, A. A. See Vanin, I. I. Tschernokun, N. P., hydrochloric-sulphuric acid method of determination of silica in ferrous metals, B., 1061.

Tschernomorskaja, L. S. See Rubinstein,

Tschernuchin, A., dichlorocthane as a solvent for [edible] oil extraction, B., 1081.

Tschertavskich, A. K., determination of stickiness of lubricants, B., 642. Tschertok, A. I. See Iljinski, V. P.

Tscherviakov, N. I., and Ostroumov, E. A., separation of small amounts of tin from arsenic and antimony, A., I, 200.

Tschesche, R., vegetable heart poisons. XV. Oleandrin, A., II, 369. Chemistry of the vegetable cardiac poisons, toad venoms, and saponins of the cholane group, A., III, 478.

and Bohle, K., vegetable heart poisons. XII. Stereochemistry of the aglucons of the heart poisons. XIII. Constitution of sarmentogenin, A., I1, 29, 100. and Haupt, W., vegetable heart poisons.

XIV. Quabain, A., II, 110. and Wolf, H. J., anemic factor of goat's milk, A., III, II. Action of pterins and other substances on composition of blood of young animals suffering from dietary anemia and of adult rats, A., III, 370.

See also Wolf, H. J. Tschesnokov, V.A., and Saposhnikov, D.I., influence of $p_{\rm H}$ on growth of purple sulphur bacteria, A., III, 145. Growth of purple sulphur bacteria in organic acids, A., III, 145.

Tschetaev, A., determination of glycerol in distillation residues, B., 20.

Tschetverikov, N., and Lifschitz, M., stabilisation of the colour of furfuraldehyde, B., 876.

Tschevitschalova, K. K. See Klebanski, A. L.

Tschgunov, P. See Jofa, Z.

Tschicharevitsch, S. A., and Kogan, G. L., semi-acid refractory materials, B., 782. Tschigirev, S. D. See Belozerski, A. N.

Tschigrin, M. F., accelerated determination of aluminium, iron, and titanium in

silicates, B., 1049. Tschilikin, M. M., rapid bleaching of linen fabric, B., 659.

and Rozova, Z. S., pectin compounds of cotton, A., III, 322.

Tschirch, E., progress in analytical chemistry with the use of complex compounds, A., I, 196. Standardisation of 0.1N-sodium thiosulphate solutions with potassium dichromate, A., I, 324.

Tschirkov, S. K., velocity coefficient of solution of silica and glassy substances, A., I, 523.

Kiniak, A. I., and Fedotova, N. S., velocity of solution of sodium silicates in water under pressure, A., I, 468.

Kiniak, A. I., and Lobanov, E. V., solution of silica in potassium or sodium silicates, B., 235.

and Schnee, M. S., successive titration of iodides and bromides in presence of large amounts of chlorides, A., I, 324. See also Nikolaev, V. I.

Tschirpig, G. Sco Heinze, R. Tschishevski, N., Nagorski, D., Vlasov, A. P., and Neverov, P., iron-containing coke, B., 104.

Vlasov, A. P., and Neverov, P., burning of ferro-coke with subsequent resmelting in a blast furnace, B., 7.

Tsehishikov, D. M., and Schachov, A. S., solubility in the system lead chloridecalcium chloride-zinc chloride-water, A., I, 82.

Tschitschibabin, A. E., neutral substances formed in Tschitschibabin's β -collidine synthesis, A., II, 348. Condensation reactions of aldehydes and ketones with ammonia to pyridine bases; condensations with acetaldchyde and crotonaldehyde, A., II, 516.

Tschitschibabin, A. E. [with Bestougev, A.], derivatives of o-[4-]tert.-butyl-m-cresol; preparation of muse ambrette, A., II,

and Hoffmann, C., 2:3:6-triamino-pyridino, A., II, 429. Kirsanov, A. V., and Arbusov, G. A.,

norbergenin, A., II, 299.

Tschitschkanov, P. P., Kataev, M. L., and Kazanskaja, A. V., non-metallic inclusions in steel, B., 681.

and Vinogradov, K. K., control of steel production on the basis of grain size, B., 790.

Tschitschkina, N. Seo Kovalski, V. V. Tschlenova, R., synthesis of azo-dyes for acetate silk, B., 1025.

Tschmutov, K. V., capillary condensation in an artificial capillary space, and determination of thickness of the water film adsorbed on glass, A., I, 612.

and Chalesova, A. T., pneumatic collar for the McBain sorption balance, A., I, 583.

and Frolov, V. S., automatic registration of amount and velocity of sorption, A., I, 100.

Tschnokov, N., plasticisation of rubber and rubber mixtures with tau-sagiz and with light crêpe; mechanical properties

of the vulcanised rubber, B., 1377.

Tschopp, G. Seo Durau, F.

Tschopp, E. See Miescher, K.

Tschopp, W., determination of ascorbic

acid in urine, A., III, 46.

Tschorni, A. T., recovery of titanium dioxide from Dniepropetrovsk titani-

ferous sands, B., 905. See also Mikei, I.J. Tschovnik, N. G. See Izbekov, V. A. Tschnehrov, F. V., antlerite from Kazakh-

stan, Siberia, A., I, 382. Tschufarov, G. I., and Tatievskaia, E. P.,

comparison of initial velocities of reactions between iron oxides and hydrogen, carbon oxide, and mixtures thereof, A., I. 314.

Tschuiko, N., nitrogen in electric steel, B., 680.

Tschnjko, V. T., determination of magnesium in presence of excess of ammonium exalate, A., I, 327. Determination of temporary hardness of water, B., 626. See also Babkin, M. P.

Tschulanovski, V. M., and Stepanov, B. I., fourth positive group bands of the carbon monoxide molecule in the Schumann

region, A., I, 164.
Tschulkov, J. I., Parini, V. P., and
Barschev, B., preparation of chlorocresols, and their oxidation to chlorotoluquinones, B., 1018.

Parini, V. P., and Staroseletz, E., action of chlorine on phenol in alkaline solution, and the possibility of preparing chloranil, B., 1018.

Parini, V. P., and Tschartova, C. A., purification of effluent water of salicylic acid and β -naphthol factories, B., 193.

Tsehumi, H., and Durand & Huguenin Akt.-Ges., production of coloured resists under aniline-black by means of ester salts of leuco-vat dyes, (P.), B., 1196.

Tschurbakov, A. See Tischtschenko, D. V. Tschvidkovski, E.G. See Trotski, J.A.Tsein, S. P. See Hwang, S. L.

Tseng, C. L., and Chao, T. Y., preparation and analysis of silicon tetraethyl and tetrabutyl, A., II, 140. and Chiang, M.C., synthesis of glycerides.

I., A., II, 45.

and Chu, (Miss) E. J. H., reaction between d-glutamic acid and ammonia or aniline, A., II, 139.

Ho, T. S., and Tuan, K., pyrolysis of trimethyl-n-heptylammonium fluorido, A., II, Ĭ37.

and Lin, T. C., preparation of totryl, B., 733.

Lin, C., and Sun, C. E., dipole moment of tetrachloroethylene, A., I, 65. Sun, C. E., and Chen, C. Y., calculation

of m.p. of aw dibasic acids, A., I, 505. Sze, C. H., and Sun, C. E., action of

hydrogen fluoride on phonyldiazomethane, A., II, 97.

and Tuan, K., laboratory preparation of explosives. II. Trinitrotoluene, B.,

and Wang, L., determination of organic bismuth by the Parr bomb method, A., II, 129.

and Wei, F., determination of organic phosphorus by the Parr bomb method, A., II, 359.

See also Chen, C. Y., and Chiang, M. C. Tseng, K., constituents of Daphne genkwa, Sieb. and Jucc. III. Synthesis of genk-

wanin, A., II, 29.
Tseou, H. F., electronic theory of organic

reactions, A., II, 269. and Chow, T. S., direct method for the differentiation of acetals from ethers, A., II, 368.

and Wang, Y. T., condensation of dimethylaniline with formaldehyde and piperidine, A., II, 113. Abnormal acetoacetic ester synthesis. I. Reaction of sodium with allyl, benzhydryl, and einnamyl acetate, A., II,

Tseu, C. Z. See Sah, P. P. T.

Tsiang, T. S. Sec Zé, N. T. Tsien, L. C. Sec Andrade, E. N. da C.

Tsoumerka, C. F., detection of free chlorine in hypochlorites, B., 540.

Tsuboi, S., petrological notes. I.—X., A.,

Tsubuku, Y. See Sameshima, J.
Tsuchida, R., spectrographic methods of studying unstable compounds. II. Aquotisation of trans-dichlorotetramminocobaltic chloride in aqueous solutions, A., I, 95. Measurement of circular dichroism in the ultra-violet regions. I., A., I, 445.

and Kashimoto, S., third absorption bands of co-ordination compounds. I. [Co(NH₃)₄ClNO₂]Cland [Co(NO₂)₆]Na₃,

A., I, 110.

and Kobayashi, M., third absorption bands of co-ordination compounds. III. Configuration of (Codg'2NH3Cl]; new type of optically active complex radicals, A., I, 216.

Kobayashi, M., and Nakamura, A., asymmetric adsorption of complex salts on quartz, A., I, 299. Asymmetric photochemical decomposition of complex salts, A., I, 318.

Tsuchiya, T. See Toyama, Y.

Tsuda, K. See Kondo, H.

Tsuge, H., experimental scurvy. XXXV. Bezssonoff's reacting substance and its identity with vitamin-C, A., III, 405. Tsuge, T. See Konishi, Kametaro.

Tsuge, Y., oxidation of nuclei acid in tissues. II. Enzymic dehydrogenation of yeast-nucleic acid in muscle. III. Enzymic dehydrogenation of yeast-nucleic acid in blood, A., III, 95.

Tsuji, Y. Sce Itano, A. Tsujimoto, M., [Japanese]ray-liver oils, B., 258. Marine-animal oils, B., 1082. and Koyanagi, H., liver oils of deep-sea fish, B., 258. Distillation of spermhead oil under reduced pressure. I., B., 1082. Distillation of pilot-whale head oil under reduced pressure, B., 1367. Distillation of sperm-blubber oil under reduced pressure, B., 1367.

Tsujimura, M., isolation of p-commaric acid from green tea, A., II, 377.

Tsukamoto, J. See Kitagawa, M. Tsumaki, T., co-ordinate valency rings. III. Inner complex salts of iron and manganese, A., II, 247.

Tsunoo, S., derivatives of aminohydroxypropanesulphonic acid; biuret reaction, A., II, 448.

See also Utzino, S.

Tsuru, K., and Henry, N. F. M., iron-rich optically-positive hypersthene from Manchuria, A., I, 433. Tsuruoka, S. Seo Hayashi, M.

Tsnruta, S., phenol-formaldehyde resins.
II. Effect of ammonia on increase in viscosity of the system phenol-formaldehyde-ethyl alcohol. III. Emulsification time of the phenol-formaldehydeammonia system, B., 259, 809.

Tsushima, K., function of the liver in salt metabolism. I. Sodium chloride content of organs and tissues. II. Sodium chloride of blood and its excretion in bile and urine. III. Absorption of sodium chloride from the gut, A., III, 21.

Tsutsumi, S., synthesis of gasoline from carbon monoxide and hydrogen at the Imperial Fucl Research Institute, B.,

Tsyganova, P. A. See Smorodineev, I. A.

Tu, C. W. See Kao, Chung H.
Tuan, K. See Tseng, C. L.
Tubbs, F. R., growth and carbohydrate supply of the tea plant after pruning, B., 378.

Tubis, M., [determination of] ammonianitrogen in eggs, B., 973.

Tubize Chatillon Corporation. See Ezzard, H. S.

Tuchman, L., Schifrin, A., and Antopol, W blood-amylase response to acetyl-βmethylcholine chloride in pancreatectomised dogs, A., III, 64.

See also Antopol, W.
Tuchmann, H., and Demay, M., action of benzypyrene on the testes, A., III, 23.

Tucholski, T., reaction of oxygen with hydrogen at a palladium surface. I. and II., A., I, 469.

and Woloszczuk, A., micro-spectrophotometric examination of the absorption spectra of oxyhæmoglobin of vertebrates, A., III, 110.

See also Sasiadek, M.

Tuck, J. L. Sce Oeser, E. A.
Tucker, C. M. Sce Sykes, W. P.
Tucker, C. W. Sce Du Pont de Nemours & Co., E. I.

Tucker, G. R., and Dewey & Almy Chem. Co., sulphur dispersion, (P.), B., 438. Amine salts of aromatic sulphonic acids, (P.), B., 1023.

Tucker, H. H. See Bender, C. B. Tucker, R. C., pig iron, B., 917. Tucker, S. H. See France, H. Tucker, W. B. See Edgerton, H. E.

Tuckey, S. L., cheese from pasteurised milk, B., 388, 1400. Water ices and sherbets, B., 1127.

Tüchler, K. See Lustig, B. Tuemmler, F. D. See Baxter, G. P., and McCoy, H.N.

Tuenter, J. P. A., determination of proteins by formol titration, B., 80. Türk, E. F. H. See Viggiano, V.

Tüxen, O., mass-spectrographic examination of negative ions in gas discharges at higher pressures, A., I, 56.

Tugai, D.G. See Bolotov, B.A.

Tui, C., McCloskey, K. L., Schrift, M. H., and Yates, A. L., filtration of reactive infusion fluids, A., III, 162. Filtration studies on pyrogenic inulin, A., III, 310. Preparation of infusion fluids, A., III, 435.

Tukamoto, T. See Asahina, Y.
 Tulaikova, K. P., entrance of lime and magnesia into plants, A., III, 236.

Tulipano, P., absorption of liquid oxygen, A., I, 207.

Tullis, D. R., and Oakley, P., refining of ferrous and non-ferrous metals and alloys, (P.), B., 251.

Tullis, E. C., and Cralley, E. M., chlorosis of rice induced by iron deficiency, A., III, 365.

Tully, J. P., nutritive value of marine products. XIV. Proximate analyses of fresh British Columbia oysters, B.,

Tully, W. C., effect of "alkalied" grain on growing chicks and poultry, B., 1404.

See also Franke, K. W.

Tnmarkin, D. See Sakostschikov, A. Tumbler, J. A. See under Tumbler Labs.,

Tumbler Laboratories, J. A., polish [for painted or lacquered surfaces], (P.), B., 466.

Tumermann, L. A., and Schimanovski, V., fluorometer based on the effect of Debye

and Sears, A., I, 479. Tunell, G., and Ksanda, C. J., crystal structure of kremerite, A., I, 154, Morphol-

ogy of calaverite in relation to its internal properties, A., I, 155. Relationship between the structural and morphological elements of kremerite, calaverite, and sylvanite, A., I, 538. Space-group and unit cell of sylvanite, A., I, 538.

Tung, C. L., and Bien, C. W., standardis-

ation of digitalis. I. Clinical standardisation, B., 618.

Tung, T., photodynamic action of methylene-blue on bacteria, A., III, 72. and Zia, S. H., photodynamic action of

dyes on bacteria, A., III, 319. Tunnieliff, R., benzidine blood agar (Penfold) for isolating S. scarlatina, A., III,

148. Tunnington, F. See Haney, F.

Tuot, M., formation of chloronitroso-compounds from ethylenic hydrocarbons (C. to C₁₁), A., II, 224, Tupholme, C. H. S., exhaust-valve steels,

B., 1351.

Tupikova, N. See Eichelberger, L. Turbin, L., determination of nickel in presence of copper, A., I, 48.

Turchan, E. J., vacuum flask method of technical gas analysis, B., 666. See also Kuzminich, I. N.

Turek, H. See Akerlöf, G.

Turco, G., acetylation of mannocelluloso from nuts of the "Dum" palm, B., 423. Alcoholic fermentation of liquid obtained by hydrolysis of seeds of the "Dum" palm, B., 486.

Tureen, L. L., post-mortem changes in mineral salt distribution in nerve ('ls

A., III, 118.

Turfitt, G. E., bacteriological and biochemical relationships in Pyocyaneus fluorescens group. II. Green fluorescent pigment, A., III, 145.

Turin, J. J., and Crane, H. R., absorption of high-energy electrons. I. and II., A.,

1, 487, 594.

Turk, K., composite article carrying a cellular backing of porcelain enamel, (P.), B., 1057.

and Porcelain Enamel & Manufg. Co. of Baltimore, decorative [enamel] surfaces [on copper], (P.), B., 347.

Turk, L. M., and Millar, C. E., effect of different plant materials, lime, and fertilisers on accumulation of soil organic matter, B., 710.

Turkevich, J. See Lennard-Jones, J. E. Turkiewicz, M. See Pilat, S. von.

Turkuletz, cuprous oxide rectifier in electrochemical practice, B., 459.

Turley, H. G., Somerville, I. C., and Röhm & Haas Co., tanning [of raw hides or

skins], (P.), B., 162. Turliguin, S. J., biological effect of centimetre waves, A., III, 214.

Turnas, P. A., and Karetnikova, A. F., chemisation of marsh soils in the far

north, B., 707. Turnau, R., rapid determination of casein and albumin content of milk, B., 489.

Turnbow, G. D. See Lindstaedt, F. F. Turnbull, L. G. See Burton, E. F. Turnbull, S. G. See Small, L. F.

Turner, A. J. See Kittredge, H. G. Turner, O. C. See Unity Heating. Turner, C. W., composition of milk, B., 83.

See also Bergman, A. J., Gomez, E. T., Graham, W. R., jun., McShan, W. H., and Reece, R. P.
Turner, E. E. See Bennett, G. M., Cook,

D. É., Lockhart, (Miss) D., and Marler, E. E. J.

Turner, H. A. See Nabar, G. M. Turner, H. C. See Gen. Electric Co.

Turner, H. G., and Scott, G. S., anthrafilt gives longer filter runs than sand, B.,

Turner, J. L., cold-rolling deep-drawing steels, B., 1061.

Turner, J. S., relation between respiration and fermentation in yeast and the higher plants, A., III, 500.

Turner, K. B., and Bidwell, E. H., bloodcholesterol in rabbits in relation to atherosclerosis, A., III, 112. Effects of iodine given to rabbits after cholesterol feeding, A., III, 176.

See also Shillito, F. H.

Turner, L. A., stepwise fluorescence in mercury-nitrogen mixtures; 3650 line, A., I, 590.

and Harris, W. T., rotational quantum numbers in single Q branches, A., I, 595. Ultra-violet bands of magnesium hydride, A., I, 596.

See also Hoffmann, B. Turner, L. B., constant temperature: principles in electric thermostat design: a mains-operated isothermal chamber constant to 0.001°, A., I, 581. See also Standard Oil Development Co.

Turner, L. E., sound-reproducing or recording needle, (P.), B., 53.

Turner, M. E. See Mason, H. H. Turner, P. E., soil conditions determining response [of sugar cane] to fertilisation with potassium, B., 479. Effect of fertiliser treatment on germination of sugar cane under field conditions, B., 480. Turner, P. K., [photographic] reversal processing, B., 1137.
Turner, R. See Bakwin, H.

Turner, R. L. See Hunt, F. B. Turner, W. D., sewage-disposal systems with special reference to biochemical

reduction, B., 1413. Turner, W. E. S., and Weyl, W., constitution and colour of iron-manganese glasses,

B., 546. See also Holland, A. J., Parkin, M., and Stanworth, J. E.

Turner, W. J., porphyria. I. Fox-squirrel,

Sciurus niger, A., III, 200. Turner, W. L. See Blackwell, H. A.

Turner & Newall, Ltd., and Harrap, E. R., slabs, blocks, or tiles of asbestos cement or similar compositions, (P.), B., 917.

Turova-Pollak, \hat{M} . B., cycloheptane and hydrogenation-dehydrogenation catalysis, A., II, 236. Irreversible catalysis of unsaturated cyclic hydrocarbons; contact transformation of △2-octahydronaphthalene, A., II, 285.

and Prokofieva, E. V., catalytic prepar-

ation of propyl and isopropyl acetate and butyrate. III., B., 647.

Turrentine, J. W. See Royster, P. H.

Turska, (Mlle.) E. See Dorabialska, (Mlle.) A.

Turski, J. S., and Checinski, J., [printing] reserves under vat dyes, B., 336.
Turtschin, F. V., effectiveness of nitro-

genous phosphate fertilisers, prepared by nitric acid extraction of phosphorites, B., 166. Comparative efficiency of "ammonitrophoses" [fertiliser], B., 166. Agricultural chemical characteristic of potassium chloride-ammonium nitrate, B., 820. Rôle of potassium and phosphorus in the utilisation of nitrate- and ammoniacal nitrogen by plants, B., 820. Tury, P., and Krausz, S., distortion and

yield point of molybdenum, B., 246. Tuszyński, J. See Mielnikowa, B. Tutakin, P. M. See Neuman, M. B. Tuttle, C. See Koerner, A. M.

Tuttle, M. H., [dewaxing of oil by] chilling, (P.), B., 323.

and Miller & Co., M. B., refining of mineral oil, (P.), B., 873. See also Miller & Co., Inc., M. B.

Tutundžić, P. S., conductivity of natural mineral waters. III., A., I, 381. Tuve, M. A., nuclear forces, A., I, 6.

Heydenburg, N. P., and Hafstad, L. R., scattering of protons by protons, A., I, 5. See also Amaldi, E., and Hafstad, L. R. Tuzson, P. See Zechmeister, L.

Tverdovski, I. P., and Moltschanov, V. S., decomposition potentials of fused electrolytes, A., I, 365. Decomposition potential of aluminium oxide, A., I, 567. Tverdun, S. See Bulankin, I.

Tweedie, A. S. See Larose, P. Tweedy, W. R., and McNamara, E. W. effect of administration of parathyroid

hormone, A., III, 41.

extract on serum-calcium level in the nephrectomised rat, A., III, 187. Smullen, C. H., and Bell, W. P., action of acid and alkali on parathyroid

Twigg, G. H., determination of deuterium hydride by means of the micro-thermal conductivity gauge, A., I, 578.

Twigg, R. S., oxidation-reduction systems in milk, B., 611.

Twiss, D. F. See Dunlop Rubber Co., and Kemp, I.

Twitchett, H.J. See Rowe, F. M.
Twombly, G. H., antigonadotropic substances, A., III, 40.

Twomey, L. S., separation and purification of hydrogen, (P.), B., 135. Separation and purification of gases, (P.), B.,

Twort, C. C., Lyth, R., and Twort, J. M., density, refractive index, and viscosity of mineral oils in relation to animal reaction, B., 728.

Twort, J. M. See Twort, C. C

Twyman, F., and Simeon, F., refractive index changes in optical glass occasioned by chilling and tempering, B., 546.

Tychowski, A., degradation of starch by amylase, A., III, 312. Starch. II. Hydrolysis of starch paste by β amylasc, A., III, 430.

and Masior, S., starch. III. Hydrolysis of starch paste by heating under pressure. IV. Hydrolysis of starch by 7.5 and 15% hydrochioric acid at low temperatures [20°]. V. Phosphoric acid content of potato-starch, A., II,

446; III, 430. Tydén, E. O. E. See Setterberg, C. T. Tygart Valley Glass Co. See Stewart, E. C. Tyler, A., and Horowitz, N. H., glycyl-glycine as a sea-water buffer, A., 1, 585. Action of substituted phenols on marine eggs in relation to their dissociation, A., III, 389.

Tyler, D. B. See Deuel, H. J., jun. Tyler, W. S., jun. See Bailey, D. P.Tyler Co., W. S., screening of sifting apparatus, (P.), B., 303.

See also Wettlaufer, W. L.

Tynen, J. See Baker, J. R. Tyson, H. See Jackson, John M. Tyson, J. T. See Fordham, S.

Tyson, T. L., and West, R., effect of trypsin on clotting of blood in hæmophilia, A., III, 413.

Tzalm, N. K. Seo Postnikov, V. F. Tzarev, B. See Brusilovski, A. M.

Tzarev, B. See Brushovski, A. M.

Tzechnovitzer, E. V., corrosion of zinc and low-copper zinc alloys, B., 48.

Tzeiden, V. V. See Mandelstam, S. L.

Tzeitlin, A. N. See Adadurov, I. E.

Tzeitlin, I. S. See Jarusov, S. S.

Tzeitlin, L. N. See Adadurov, I. E.

Tzerevitinov, S. V., preparation of fruit and berry extracts, B., 836.

Tzibina, B. C., determination of copper covariate electrolytes, B. 683.

cyanide electrolytes, B., 683. Tzibulevski, C. I. See Alexandrov, A. F. Tziklis, D. S. See Kritschevski, I. R. Tzinberg, S. L., determination of metals by

the hydroxyquinoline method, A., I, 531. Determination of titanium and its dioxide in acid-resistant steel, B., 1062.

Tzonev, and Kochanevski, determination of moisture in oil seeds, B., 390.

Tzuipkin, G. S., fine paper from oiled and

tarred rag waste, B., 656.

Tzuipkina, M. N., Kurennova, A. M., and
Egorova, L. V., half stuffs from wood and bast of mulberry branches, B., 25.

Tzukerman, I., and Daeva-Stepauenko, I., preparation of high-grade anthracene and carbazole by vacuum distillation of semi-crude anthracene, B., 1017.

Tzukerman, S. V. See Liubomudrov.

Tzukervanik, I. P., and Nazarova, Z. N., alkylation of phenols with alcohols in presence of aluminium chloride. II. Alkylation with sec .- and n-alcohols, A., II, 287.

and Sidorova, N. G., condensation of alcohols with aromatic hydrocarbons in presence of aluminium chloride. V. Condensation of cyclohexanol with benzene and toluene, A., II, 331.

and Terentieva, I., condensation of alcohols with aromatic hydrocarbons in presence of aluminium chloride. IV. Condensation of aliphatic alcohols with naphthalene, A., II, 331.

and Vichrova, G., condensation of alcohols with aromatic hydrocarbons in presence of aluminium chloride. III. Condensation of primary alcohols with benzene and toluene, A., II, 331. Tzuladze, T. E. See Kometiani, P. A.

υ.

Ubaldini, I., rapid determination of copper in pyrites, B., 567. Humic acids, B., 999.

and Magaldi, F., constitution of Italian

fuels. II., B., 743. and Pelagatti, U., determination of magnesium in aluminium alloys, B., 576.

and Siniramed, C., humic acids. III., B., 747.

Ubbelohde, A. R., expansion pressures of metallic hydrogen and deuterium, A., I, 22. Properties of the metallic state. I. Metallic hydrogen and its alloys. II. Metallic hydrogen and deuterium, A., I, 356. Thermodeuterium, A., I, 356. Thermodynamics and velocity of irreversible processes. I.—III., A., I, 362, 571.

and Robertson, J. M., new form of resorcinol, A., I, 502.

See also Robertson, J. M.

Ubbelohde, L., principle of the suspended level; applications to measurement of viscosity and other properties of liquids, A., I, 202. Simplest and most accurate viscosimeter and other instruments with suspended level, B., 1. Growth of mineral oil science, B., 866. Viscosimeter with suspended level; (elimination of the influence of surface tension by the suspended spheric level), B., 988. Viscosimeter, (P.), B., 742.

[with Schlosser, F.], experimental cracking plant for mineral oils, B., 869.

and Gralheer, oxidation of paraffin [wax], B., 642.

See also Deuts. Bekleidungsind.

Uber, F. M., and Goodspeed, T. H., microincineration. I. Localisation of inorganic elements in plant-cell walls. II. Localisation of ash-yielding substances during meiosis: significance in Xirradiation phenomena, B., 273.

Uchida, S., and Murata, Sunao, sesqui-cryptol, a new crystalline sesquiterpene alcohol in the essential oil of Japanese sugi (Cryptomeria japonica, Don) Îcaves, A., II, 381.

Uchihashi, R., influence of cerebral cortex on calcium metabolism, A., III, 24. Influence of harmine on blood picture and p_{ii} of rabbit blood, A., III, 217. Pharmacological studies of the automatic movement of the rabbit testicle. II. Influence of the thyroid and panereas on the sensitivy of the testicle towards acetylcholine and adrenaline, A., III, 265. Uchimaru, S., application of nickel alloys

in water-power plants, B., 353. Uchimura, Y., effect of ultra-violet and Xrays on oxidation-reduction potentials of frog's muscle in vivo, A., III, 388.

Ucholin, S. A., influence of temperature on the combination spectrum of carbon tetrachloride in liquid and gaseous

states, A., I, 219. Udalov, N. A., apparatus for study of

corrosion of metals, B., 451. Uddeholms Aktiebolaget, ferro-alloys, (P.), B., 690.

Uddin, M. Z. See Allen, J. F., and Shoenberg, D.

Uden, J. H. M. van. See Liempt, J. A. M. van.

Udey, E. C. See Mader, E. O. Udovenko, N. V., and Bogdantschenko, A. G., representative samples of ferrochromium, B., 446.

and Prokopenko, F. F., rapid gravimetric determination of silicon in special steels, B., 447.

Udy, M. J., and Swann, Res., Inc., pure

phosphoric acid, (P.), B., 35.
Udylite Process Co. See Dubpernell, G. Uebel, F., evaluation of notched-bar impact tests on brittle materials, B., 1349.

Ueberbacher, G. See Fasol, T.

Ueda, S. See Ueno, Sei-ichi.
Ueda, Y., wood chemistry. IX. Chemical composition of the new pulp wood "sugi" (Cryptomeria japonica), B., 1321. Japanese dyeing tannins. XVII. Absorption of "Kahlbaum" tannin by cellulose, B., 1326.

and Nakamura, S., cellulose formate. VI. and VII., B., 1186, 1319.

Uehara, Y. See Mizushima, S. Uemura, T., and Abe, M., spectrochemical study of colours derived from quinone-

imine, A., I, 217.
Uemura, Y. See Arakatsu, B.
Ueno, K. See Ito, Takeo.

Ueno, Sei-ichi, wetting, detergent, and toilet agents prepared from alkali sulphates of aliphatic higher alcohols. II. and III., B., 756. Rice[-bran] oil and its utilisation. I. Preparations properties, and constituents. II. Preparation of stearine, oleine, and hair-dressing oil from rice oil, B., 1081. Negative catalysts in hydrogenation of fatty oils. XI. Behaviour of niokelzinc, -barium, and -lead catalysts, B., 1366.

and Aso, M., rice[-bran] oil and its utilisation. III., B., 1366. and Hayashi, Y., influence of active

charcoal refining on rancidity exhibited thereafter by the refined oils and fats during storage, B., 808. Influence of Japanese acidic earth and activated acidic earth-refinings on rancidity exhibited thereafter by refined oils and fats during storage, B., 808. Qualities of Japanese washing soaps, B., 1365.

and Iwai, M., highly unsaturated C₂₈-fatty acids in Hokke oil, A., III, 55.

Ueno, Sei-ichi, and Koyama, R., synthesis of hydrocarbons by reduction under pressure of fatty acids from refining of fish oils. I., B., 1307.

and Nakaguchi, S., unsaponifiable matter of liver and body oils of sea fish, B.,

nd Nishikawa, Y., composition of Japanese walnut oils, B., 1366.

Okamura, Z., and Ueda, S., hydrogenation of oils with a multicomponent catalyst under high pressures, B., 1367.

See also Komori, S.

Ueno, Shigeo. See Kanamarn, K. Ueno, S. I. See Komori, S.

Ufford, C. W., line strengths in neon 1, A.,

I, 385. Ufimtzev, V., structure of the sulphur

black dye nigrosulphine K, A., II, 429. Mechanism of sulphonation of aromatic compounds, and the hydrolysis of their sulpĥonic acids, A., II, 490.

Ugami, S. See Nakahara, W. Uglowa, T., oligodynamic action of silver on typhus vaccine, A., III, 148.

Ugo, \tilde{A} . See Vlès, \tilde{F} .

Ugriumov, V. D. See Sumarokov, V. P. Ugrjumov, M. V. See Baschkirov, A. N.

Uhara, I., relations among fundamental electrochemical quantities. III., A., I, 310.

and Nakamura, Morizumi, adsorption of solvent vapour by solute crystal, A.,

Uhde, F., removal of liquids containing solid materials and possibly gases from high-pressure chambers, (P.), B., 198. Treatment of carbonaceous materials, (P.), B., 1008.

Uhde Ingenieur-Buro, F. See Pfirrmann,

Uhl, F. A., polarographic determination of molybdate and phosphate ions, A., I,

and Bauer, R., three-year liming trials on acid pastures, B., 595.

Uhl, K., adaptation of Gutzeit's method for detection of arsenic to its determination in series experiments, A., I,

Uhlenbeck, G. E., and Kuiper, H., law of Sargent, A., I, 438.

See also Lier, C. van, and Ornstein, L. S.Uhlenhuth, P., and Remy, E., destruction of M. tuberculosis by some proprietary disinfectants, A., III, 148.

Uhler, F. G. See Du Pont de Nemours

& Co., E. I. Uhlig, H. H., and Duemmling, F. C., free alkali determinations in soap, B., 151.

Uhlmann, W. See Kluge, W. Uhrig, K. See Levin, H.

Ujhelyi, (Mlle.) E. See Zechmeister, L.

Ukawa, H. See Takubo, J. Ulbrich, F. See Ditz, H.

Ulich, H., and Biastoch, K., e.m.f. of non-aqueous cells. III. Sulphate and hydrogen electrodes in anhydrous hydrazine, A., I, 310.

See also Spiegel, G. Uljanischtschev, M., detection of bivalent manganese, A., I, 264.

Uljanov, A. A., radiations accompanying corrosion of metals. I., A., I, 571.

Ullmann, D. See Jander, G. Ullmann, H., and Aluminium Plant & Vessel Co., clarification of worts, (P.), B., 1396.

Ullmann, L. See Deleano, N. T.

Ullock, D. S., and Badger, W. L., liquidfilm heat-transfer coefficients for condensing Dowtherm-A vapours to petroleum and linseed oils in a vertical-tube heater, B., 1284.

Ullrich, H., and Schneider, M., micro-determination of menthol, menthone, and menthyl ester and of the essential oil of

Mentha, A., II, 130.
Ullrich, W. See Texas Co.
Ulmann, M., study of solute state of natural high polymerides, A., I, 79. See also Rathje, W.

Ulmer, P. F. See Lauenstein, C. F.

Ulmer, R., foaming and priming of boiler water and condenser leakage; electrometric measurement, B., 627.

Ulpts, R. See Stempell, W.

Ulrich, M., properties of [metallic] materials at high temperature, B., 1217.

Ulrich, R. See Echevin, R. Ulrich, W. See Lockemann, G.

Ultée, A. J., ethereal oils of rhizomes of Languas (Alpinia) varieties, A., III, 81. Essential oils from leaves of Languas (Alpinia) varieties, A., III, 332. Essential oils from leaves of Amonum dealbatum, Roxb., B., 619. Essential oil from fruit of Pittosporum monticolum, Miq., B., 979.

Umbach, G. See Bauer, K. H.

Umbach, Guido. See Leichter, H., and Nord, F. F.

Umbreit, W. W., comparative efficiency of free and combined nitrogen for nutrition of soya bean, B., 168.

Oreutt, F. S., and Wilson, P. W., comparative efficiency of free and combined nitrogen for nutrition of the soya bean, A., III, 366.

Umeda, K., and Ono, Y., dynamic liquid model of atomic nuclei, A., I, 440.

Tomonaga, S., and Ono, Y., mutual potential energy between two deuterons, A., I, 440.

See also Tomonaga, S.

Umezawa, H. See Negishi, M., and Tamamushi, B.

Umezawa, S., selenophen. III. β -Nitroselenophen and orientation in the selenophen nucleus, A., II, 172.

Umova, M. A. See Mikulinski, A. S. Umpleby, E. See Hearns, H. G. H.

Umschweif, B., and Gibayle, K., does pyrophosphate occur in muscle and tissue? Ā., IĪI, 167.

See also Gibaylo, K., Ostern, P., and Parnas, J. K.

Una Welding, Inc. See Austin, J. B., and Kronbach, E. W Unangst, R. B. See Derr, R. B.

Unckel, H., flow in cold-drawing of profile bars of various metals, B., 921.

Underhill, E. See Allen, W. H. Underkofler, L. A., and Fulmer, E. I., production of dihydroxyacetone by action of Acetobacter suboxydans on glycerol, A., III, 182.

Underpinning & Foundation Co., Inc. See Raisch, W.

Underwood, A. J. V. See Distillers Co. Underwood, E. B. See Mellor, D. P.

Underwood, E. J., cobalt content of iron compounds and its possible relation to anæmia, A., III, 299.

and Snook, L. C., protein, ash, calcium, and phosphorus content of Western Australian cereal grains, B., 78. Underwood, W. F. See Charch, W. H.,

and Haskins, J. F.

Ungar, Georg, distribution of spectral sensitivity of sensitised silver halide films at low temperatures, A., I, 471.

Ungar, Georges, and Dubois, J., presence of a substance similar to histamine in urine of pregnant women, A., III, 378.

and Parrot, J. L., anaphylactic shock in vitro; liberation of an active substance from the isolated lung of a sensitised guinea-pig, A., III, 5.

Parrot, J. L., and Bovet, D., inhibition of the effect of histamine on isolated intestine of guinea-pigs by sympathomimetic and sympatholytic substances, A., III, 135.

Parrot, J. L., and Pocoulé, A., presence of histamine in normal human blood, A., III, 195.

and Pocoulé, A., elimination of histamine and its absence from normal urine, A., III, 202.

See also Bruhl, M. L.

Ungefehr, E., and Klein, Schanzlin, & Becker A.-G., vacuum pumps, (P.), B.,

Ungemach, O. See Auwers, K. von.

Unger, F., fish-liver oils and vitamins, B., 58, 464.

Unger, G. K. See Halder Unger, H. See Awe, W. See Halden, W.

Unger, T. B., coating iron or steel structures with metals, (P.), B., 1225, 1360.

Ungerecht, K. See Eichholtz, F. Ungley, C. C., further purification of Dakin and West's liver fraction; purified anahamin compared with the original product in regard to effect in pernicious anemia, A., III, 87. See also Dakin, H. D.

Ungnade, O., Richards, W. F., and S.M.A. Corp., recovery of [plant] pigments, (P.), B., 264.

and S.M.A. Corp., meat sauce, (P.), B., 978.

"Unichem" Chemikalien-Handels A .- G. See Schrauth, W.

Unik, V., and Volkovuisskaja, S., influence of ovary lysate on egg production in hens, A., III, 425.

Union Carbide & Carbon Corporation, and Baur, K., products including aliphatic

aldehydes, (P.), B., 214.
Becket, F. M., and Franks, R., heattreatment of chromium-alloy steels, (P.), B., 1070.

and Boshkoff, G. J., apparatus for producing oxygen of high purity, (P.), B., 1203.

and Burgess, C. O., [ferrous-alloy] castings, (P.), B., 799.

and Cox, H. L., prevention of solution loss from liquid systems, (P.), B., 1148. Cox, H. L., and Carruthers, T. F., hydroxycarboxylic acid esters, (P.), B., 1173.

Cox, H. L., and Greer, P. S., esters, (P.), B., 213. Production and purification

of diethyl ether, (P.), B., 1021. Cox, H. L., and Roper, T. D., jun., dialkyl ethers of glycol, (P.), B., 648. and Dana, L. I., rejecting heat from a cascade system, (P.), B., 635.

and Doom, E. F., removal of tin from columbium [niobium] alloys, (P.), B., 252.

and Graham, R. N., ethyl alcohol, (P.), B., 416.

Graham, R. N., and Brackett, W. S., distillation apparatus, (P.), B., 306.

Union Carbide & Carbon Corporation, Greer, P. S., and Gorman, P., jun., sulphation of olefines, (P.), 1170.

Jones, L. T., Kennedy, H. E., and Rotermund, M. A., electric welding

[of steel], (P.), B., 799. and Kinzel, A. B., melting and refining of metals, (P.), B., 799. Gases [for bright annealing], (P.), B., 931. Apparatus for use at low temperatures, (P.), B., 1145.

and Lytle, A. R., alloy, (P.), B., 932. Lead bronze composition, (P.), B., 932. Copper-base composition, (P.), B., 932.

and Perkins, G. A., dichloroalkyl ethers, (P.), B., 524.

Perkins, G. A., and Toussaint, W. J., acetonylacetone, (P.), B., 1021. and Radcliffe, E. E., lime product, (P.),

B., 1336.

and Ray, A. B., solidified fuel, (P.), B., 1014. Odour filter [for air], (P.), B., 1414.

Schrader, Hans, and Bossert, E., fumigant

composition, (P.), B., 398. and Toussaint, W. J., hydrogenation of ethylpropylacraldehyde, (P.), B., 1312.

and Wickert, J. N., dichlorodiisopropyl ether, (P.), B., 1021. and Wissler, W. A., [cobalt] alloys [for

cutting tools or welding rods], (P.), B., 252.

Union Carbide & Carbon Research Laboratories, and Keir, J. M., welding, (P.), B., 1071.

Kennedy, H. E., Rotermund, M. A., and Jones, L. T., automatic electric welding [machine], (P.), B., 936.

Union Oil Co. of California, Aldridge, $B.\ G.$. and Hopper, B., treatment of oils [to separate asphalt]. (P.), B., 414. Dewaxing of oils, (P.), B., 873. and Bailey, J. R., separation and purification of nitrogen bases [from

petroleum], (P.), B., 421. Separation of nitrogen bases [from petroleum], (P.), B., 421.

and Beynon, Le G., separation of hard wax from soft wax associated therewith, (P.), B., 521.

and Blount, A. L., castor machine oils,

(P.), B., 367.

and Bray, U. B., separating wax from oil, (P.), B., 18. Lubricating oil, (P.), B., 18. Solvent extraction of oils, (P.), B., 18. Treatment of oils [to separate asphalt], (P.), B., 414. Separation of asphalt and wax from oil, (P.), B., 1167. Asphaltic [paving] composition, (P.), B., 1210.

Bray, U. B., and Carr, D. E., removal of

wax [from oils], (P.), B., 755.

Bray, U. B., and Swift, C. E., lubricating

oils, (P.), B., 322.
Dillon, L., and Swift, C. E., dewaxing of oil, (P.), B., 18, 755, 1164.

and Ewing, F. J., purification of naphth-enic acids, (P.), B., 420. and Fisher, H. F., dewaxing of oil, (P.),

B., 18, 646. Apparatus for dewaxing

oil, (P.), B., 323.

Fisher, H. F., and Aldridge, B. G., dewaxing of oils, (P.), B., 873. and Gard, E. W., fractional distillation,

(P.), B., 5. and Hopper, B., separating oil from wax cakes, (P.), B., 18. Removal of wax from oil, (P.), B., 18.

Union Oil Co. of California, and Merrill, D. R., high-mol. wt. compounds from petroleum oil, (P.), B., 115. Dowaxing of oils, (P.), B., 210, 1303. Solvent extraction of hydrocarbon oils, (P.), B., 646. Lubricating oil, (P.), B., 875. Solvent extraction of oil, (P.), B., 875. Merrill, D. R., and Subkow, P., dewaxing of oils, (P.), B., 210.

and Nuekom, O. W., miscible oil, (P.),

B., 1304.
Ott, T. F., Clarke, P. S., and Marter, C. H. V., barium [lubricating] grease, (P.), B., 211.

and Ragatz, E. G., oxidised asphalts, (P.), B., 113. Absorption system [for hydrocarbon fractions], (P.), B., 414. and Shepherd, G. C., jun., quenching

oils, (P.), B., 115.

and Swift, C. E., fractionation of mineral oil, (P.), B., 19. and Yngve, V., electrolyte for electro-

lytic condensers, (P.), B., 695.

and Zenner, G. H., effecting the discharge of a volatile liquid, (P.), B., 635. Union Wadding Co. See Esselen, G. J.

United Carbon Co., Inc. See Grote, H. W. United Chromium, Inc. See Lukens, H. S. United Color & Pigment Co., Inc., and Cauwenberg, W. J., extraction of titanium compounds from titaniumcontaining ore, (P.), B., 437.

Ryan, L. W., and Cauwenberg, W. J., composite titanium pigments, (P.), B.,

United Engineers & Constructors, Inc. Sec Chewning, W. L.

United Engineering & Foundry Co., articles such as welding rods from rim steel, (P.), B., 1071.

United Gas Improvement Co. See Claffey, J. B., Evans, O. B., Fulweiler, W. H., and Ward, A. L.

United Gas Industries, Ltd. See Johnson, E. R. H.

United States Bureau of Mines, and Davis, C. W., report of [concentration] tests [on various ores], B., 1063.

U.S. Bureau of Standards, temperature interconversion tables (° C. = ° F.) and m.p. of the chemical elements, A., I, 231.

U.S. Department of Agriculture, control of cotton root rot in the irrigated southwest, B., 823.

U.S. Fire Protection Corporation. See Willenborg, W.J.

U.S. Galvanizing & Plating Equipment Corporation. See Potthoff, K. T. U.S. Gypsum Co. See Linzell, H. K., Roos,

C. K., and Scholz, H. A.

U.S. Industrial Alcohol Co., alkyl derivatives of amidated aromatic hydrocarbons, (P.), B., 760.

See also Burghart, L. M.

U.S. Process Corporation. See Heuser, H. U.S. Rubber Co., asbestos yarn, (P.), B., 333. and Meuser, L., vulcanisation of rubber, (P.), B., 67.

See also Barnard, A. E., Fisher, H. L., Shinkle, S. D., Smith, O. H., and

Watkins, P. H.

U.S. Rubber Products, Inc., [stabilisation of] rubber-like chloro-2-butadiene-1:3-[βchloro-4ay-butadiene] polymer[ides], (P.), B., 161. Elastic yarn, (P.), B., 432. Plastic compositions and articles made therefrom, (P.), B., 468.

and McGavack, J., preservation of [rubber] latex, (P.), B., 815.

See also Brooks, A. E., and Leaper, P. J.

U.S. Steel Corporation, Ellis, E. E., and Queneau, A. L. J., [wot] electromagnetic separation of materials, (P.), B.,

See also Bain, E. C., and Larsen, B. M. U.S. Steel Corporation Research Laboratory, process and result of austenite transformation at constant temperature, B., 560.

United Steel Cos., Ltd., Swinden, T., and Reeve, L., high-tensile structural steels,

(P.), É., 932.

United Water Softeners, Ltd., carbonated beverages, (P.), B., 85. Heat exchangers for fluids, (P.), B., 510. Sterilisation of water by means of chloroamine, (P.), B., 986. Removal of bases from water, B., 986. (P.), B., 1140.

United Wire Works (Birmingham), Ltd., and Lowndes, H., metals and alloys

[brass], (P.), B., 691.

Unity Heating, Ltd., and Turner, C. C., thermostats, (P.), B., 3.

Universal Oil Products Co., stabilisation and refining of cracked hydrocarbon distillates, (P.), B., 320. Stabilisation of motor fuels, (P.), B., 322. Catalytic refining treatment of hydrocarbon distillates, (P.), B., 645. Production of valuable hydrocarbons by selective polymerisation of olefinic hydrocarbons, (P.), B., 648. Effecting chemical reactions of olefinic hydrocarbons, (P.), B., 648. Alkylation of aromatic compounds, (P.), B., 650. Production and application of catalyst for chemical reactions [polymerisation of hydro-

carbons], (P.), B., 1201. and Alther, J. G., heating of fluids, (P.), B., 5. Conversion of hydrocarbon oils, (P.), B., 413. Cracking of [hydro-carbon] oil, (P.), B., 1015.

and Augell, C.H., conversion and coking of hydrocarbon oils, (P.), B., 521. Conversion of hydrocarbon oils, (P.), B., 521. Cracking and coking of hydrocarbon oils, (P.), B., 1011.

and Benedict, W. L., treatment of motor fuel, (P.), B., 1163.

Borst, W. B., and Gerhold, C. G., resins [from wood-tar pitch], (P.), B., 469. and Comay, S., refining of hydrocarbon oil, (P.), B., 1012.

and Davis, R. F., treatment of tars, (P.), B., 319.

and Day, R. B., treatment of hydrocarbon oils, (P.), B., 114, 209, 1161. Improvement of hydrocarbon liquids, (P.), B., 211. Asphalt and lubricating oils, (P.), B., 1160. Improving gasoline, (P.), B., 1162. Desulphurisation of light hydrocarbons, (P.), B., 1302. and Dubbs, C. P., hydrocarbon oil

conversion, (P.), B., 1016. and Egloff, G., treatment of hydrocarbon oils, (P.), B., 1302.

Egloff, G., and Fisher, A., treatment of

hydrocarbon oils, (P.), B., 1016. Egloff, G., and Morrell, J. C., treatment of hydrocarbon oils, (P.), B., 321, 1302. and Fisher, A., conversion and coking of hydrocarbon oils, (P.), B., 645.

and Grosse, A. von, treatment of hydrocarbon oils, (P.), B., 114, 321.

and Heid, J. B., conversion of hydrocarbon oils, (P.), B., 521, 646. and Henny, V., lubricating oils, (P.), B.,

1015. Conversion of higher-boiling hydrocarbons to lower-boiling hydrocarbons, (P.), B., 1160.

Universal Oil Products Co., and Howard, W. R., conversion of petroleum oil, (P.), B., <u>5</u>21.

and Huff, L. C., hydrocarbon oil conversion, (P.), B., 413, 1011. Treatment of hydrocarbon oils by fractional distillation and pyrolytic conversion, (P.), B., 1013.

and Ipatiev, V. N., purification of gases, (P.), B., 318. Treatment of hydrocarbon oils, (P.), B., 321, 873, 1302. Alkylphenols, (P.), B., 760. Treatment of hydrocarbons, (P.), B., 873. Hydrocarbons, (P.), B., 1309. Ipatiev, V. N., and Grosse, A. von, treat-

ment of hydrocarbon oils, (P.), B., 1302.

Ipatieff, V. N., and Komarevski, V., polymerisation of olefines, (P.), B., 1019.

and Lowry, C. D., jun., treatment of hydrocarbon oils, (P.), B., 1161. Treatment of motor fuel, (P.), B., 1163. and Mekler, L. A., apparatus for heating fluids [in tubes], (P.), B., 996.

and Miller, G. W., treatment of hydrocarbon oils, (P.), B., 646.

and Morrell, J. C., refining of petroleum oil, (P.), B., 16. Treatment of hydrocarbon oils, (P.), B., 16, 114, 1012, 1161. Acetylene, (P.), B., 113. Treatment of hydrocarbons, (P.), B., 321, 1305. Treatment of motor fuel, (P.), B., 322. Conversion of hydrocarbon oils, (P.), B., 646, 1016. Treatment of hydrocarbon gases, (P.), B., 755.

and Nelson, E. F., conversion of hydrocarbon oil, (P.), B., 19. Heating of [hydrocarbon oil] fluid, (P.), B., 1015.

and Seguy, J. D., cracking of hydrocarbon oils, (P.), B., 19. Treatment of hydrocarbon oils, (P.), B., 321, 646. Treatment of hydrocarbons, (P.), B., 414. Heating of fluids, (P.), B., 740. and Skowronski, F. J., treatment of hydrocarbon oils, (P.), B., 1012.

and Swartwood, K., conversion of hydrocarbon oils, (P.), B., 1016.

and Tropsch, H., unsaturated hydrocarbons [ethylene], (P.), B., 1019.

and Weber, H. C., storage of gasoline, (P.), B., 17.

Unsöld, A., stellar atmospheres, A., I, 55. Untersuchungs- & Forsehungs-Laboratorium für Lacke & Farben, practical gloss measurement. II., B., 990.

Unterzaucher, $J_{\cdot,\cdot}$ use of normal ground joints in micro-Kjeldahl apparatus, A., 1, 267.

and Bürger, K., micro-analytical determination of oxygen in organic compounds, A., II, 358.

Unverdorben, O. See Krüger, W. Uong, D. D., and Fitchburg Paper Co.,

coated paper, (P.), B., 130. Tota, H., sciadopitene, a new, crystalline

diterpene, from oil of leaves and twigs of Sciadopitys verticillata, S. et Z., A., II, 158.

Uozaki, K. See Toyama, Y. Uppal, I. S. See Dhingra, D. R.

Upson, F. W., Brackenbury, J. M., and Linn, C. B., acetyl derivatives of monobasic sugar acid lactones, A., II, 49. 🦟 Upthegrove, C. See Mikulas, W.

Upton, W. V., and Buswell, A. M., titanium salts in water purification, B., 1139. See also Boruff, C. S.

Urabe, S., action of thallium on the teeth. III. Effect on the chemical composition. IV. Pathological changes, A., III, 310. Uralov, M. A., and Bereshnoi, A. S., carbon brick, B., 443.

Urazov, G. G., transformation in the ternary system sulphur-lead-oxygen, A., I, 30.

Morozov, I. S., and Schmantzar, M. P., ehlorination of minerals containing

rare-earth elements, B., 541. and Schuschpanova, T. E., ageing of ternary alloys, B., 1357.

Urbain, G., homeomerism, the identity of physicochemical characteristics of substances of different composition, A.,

See also Aston, F. W.

I, 602.

Urhain, O. M., and Lewis, C. H., water purification, (P.), B., 94. Purification of organically polluted waters, (P.), B., 94.

Stemen, W. R., and Lewis, C. H., purification of potable and polluted waters, (P.), B., 194, 1140. Reagent for water purification, (P.), B., 194.

Urban, F., and Eaton, M. D., spectroscopic observations of reactions between lactoflavin, the Coulter compound, "cyto-chrome b," and cytochrome c, A., III, 416.

Urban, F. F., phosphatides in healthy and diseased hearts, A., III, 456.

See also Apprich, K.

Urban, S. F., and Chipman, J., nonmetallic inclusions in steel, B., 45,

Urbański, T., thermal analysis of binary mixtures containing esters of nitric acid. IV., A., I, 137. NN'-Dimethyldiamide of tartaric acid and NN'dinitrodimethyldiamide of tartaric acid dinitrate, A., II, 54. Sensitivity of explosives to shock. I. and II., B., 623. and Janiszewski, Z., nitration of cellulose

and starch with nitric anhydride, B., 1033.

Kwiatkowski, B., and Miladowski, W., influence of aromatic nitro-compounds on stability of nitric acid esters, B., 623.

and Skrzynecki, J., thermal analysis of mixtures of ammonium nitrate, guanidine nitrate, and nitroguanidine, A., I, 137.

and Slon, M., nitration of paraffins by nitrogen peroxide, A., II, 224. Nitration of n-paraffins. II., A., II, 317.

Urbanyi, L. See Marek, J. Urbschat, E. See Bonrath, W. Ure, W. See DeLisle, F. A.

Urechia, C. I., Benetato, G., and Retezeanu, potassium in adrenal insufficiency, A., III, 320.

Urey, H. C., deuterium and its compounds

in relation to biology, A., III, 22.

Fox, M., Huffman, J. R., and Thode,
H. G., concentration of ¹⁸N by a chemical exchange reaction, A., I, 473. See also Huffman, J. R., Pegram, G. B.,

and Taylor, T. I. Urion, E., and Baum, E., catalytic and acid dehydration of divinyl glycol, A., II, 225.

and Namias, L., chlorobromide of styrene, A., II, 283.

Urondo, F. E., determination of radon and thoron in the subsoil air at Sante Fe,

A., I. 584. Urushibara, Y., and Ando, T., formation of an isomeride of neoergosterol by pyrolysis of ergopinacone, A., II, 60. Photochemical dehydrogenation of 7-dehydrocholesterol, A., II, 99.

Urushibara, Y., Ando, T., Araki, H., and Ozawa, A., cholesterol derivatives, A., II. 416.

and Takebayashi, $M_{\cdot \cdot}$, nitrile esters of β-methylpropene-aaγγ-tetracarboxylic acid, A., II, 9. Addition of hydrogen bromide to allyl bromide in presence of various substances. I. II. Effects of ferro-magnetic catalysts. Elucidation of so-called peroxide effect. IV. Effect of ferromagnetic metals free from oxides; catalytic action of ferromagnetic metals and oxygen. V. Comparison of effect of oxygen with that of peroxide; relation between amount of oxygen present and result of addition. VI. Homogeneity of the catalytic action of oxygen; theory of the oxygen effect, A., II, 43, 132, 224, 270; III, 81. Effect of oxygen on addition of bromine to cinnamie acid in carbon tetrachloride, A., II, 418. Cannizzaro reaction, A., II, 421.

See also Barger, G. Urusov, V. V. See Belopolski, A. P. Usami, S., respiration and assimilation of certain water mosses, A., III, 329.

Usatenko, J. I., and Vojtaschik, A. A., determination of p_H of natural waters, A., I, 260.

Uschakov, M. I., and Bronevski, A. I., hydrogenation of pyridine and pyridine bases under pressure in presence of nickel-silica gel catalysts, A., II, 304. and Jakovleva, E. V., relative velocity

of catalytic hydrogenation of pyridine and picolines in hydrogenation of mixtures of pyridine bases, A., II, 304. and Michailov, B. M., catalytic reduction

of ethylene chlorohydrin, A., II, 174. and Tchistov, V. O., chlorine nitrate, A., I, 42

See also Zelinski, N. D.

Uschakov, S. N., and Gribkova, V. I., synthesis of benzylcellulose, B., I321. and Rozenfeld, A. A., benzyl dihydroxy-

abietate, a new plasticiser, B., 698. and Schtaniko, I. G., condensation of acctaldehyde, B., 1370.

Usohakova, A. S. See Kratinova, K. G.; and Savron, E. S.

Ushakov, M., and Lutenberg, A., oxidation of cholesterol and dehydroandrosterone by means of osmic acid, A., II, 458.

Ushastkina, Z. V., and Matveev, V. J., deformation of paper in printing, B.,

Usines de Melle, chlorohydrins, (P.), B., 117. Aliphatic primary amines, (P.), B., 215. Dehydrogenation of saturated hydrocarbons, (P.), B., 416. Hydration of olefines, (P.), B., 416. Manufacture of formaldehyde by electro-synthesis from carbon monoxide and hydrogen, (P.), B., 1173.

and Guinot, H. M., purified alcohol from worts, (P.), B., 77. Manufacture of esters, especially of ethyl acetate,

(P.), B., 1172.
Usiukin, I. P., and Sutschkov, V. N., application of absorptional cooling installations to intensification of sulphuric acid manufacture, B., 338.

Usl Battery Corporation, [multi-cell] storage batteries, (P.), B., 461. Usman, M. See Samuel, R.

Usoni, L., flotation of gold-bearing minerals

from Eritrea, B., 571. Usova, K. M. See Roshkov, V. M.

Uspenski, N. A., bound water of meal of selected wheat varieties as a criterion of their bread-baking value, B., 280.

Uspenski, V. A. See Orlov, N. A. Ussing, H. H. See Krogh, A.

Ust-Katschkintzev, V. F., electric conductivity of the system ethylenediamine-water, A., I, 23. Surface tension and refraction of the system ethylenediamine-water in relation to its other properties, A., I, 23.

Ustinov, A., production of di-n-butyl phthalate, B., 1018.
Ustinov, S. Seo Petrov, G.

Ustiushanina, E, M. See Prokochev, V. N. Ustianova, P. V. See Finkelstein, V.

Usuelli, F. See Antoniani, C.

Utevski, A. M., rôle of lactic acid in "liberation" and "binding" of adren-

aline, A., III, 37.
Kovtun, E. I., and Schleifer, K. M., internal exchange in glandular tissues, A., III, 385.

and Levantzova, N. S., influence of histolysates on enzymic processes, A., III, 392.

Utotschkin, V. I., free and bound water in proteins of wheat and their dependence on $p_{\rm H}$, A., I, 305.

Utschastkina, Z. V., anticorrosive paper, B., 332.

Utsunomiya, E. See Kōno, M.
Utzinger, G. E. See Karrer, P.
Utzino, S., and Tsunoo, S., cholesterase, A., III, 481.

Uyeda. See under Ueda. Uyeo, S. See Kondo, H.

Uyldert, I. E. See De Fremery, P., and Reichstein, T.
Uyterhoeven, IV. See Gen. Electric Co.

Uzel, R., and Funk, K., ferroamminopentacyanides, A., I, 528.

Uzamasa, Y., and Okuno, H., spectrographic chemical analysis. III. Quantitative spectrographic analysis of salt solutions, A., I, 632.

V. G. Manufacturing Co., Ltd., and Van Gelderen, F. M., manufacture or treatment of textile fabrics, (P.), B., 234. Vacca, C. See Holz, F.

Vacher, H. C. See Thompson, J. G. Vacirca, F., modification of the Bierry-Gruzewska method of determining liverglycogen, A., III, 168. Blood-sugar, lecithin, and liver-glycogen in normal and thyroidectomised animals. I.—IV., and VI., A., III, 178, 265, 390. Thyroxine, di-iodotyrosine, and liver-glycogen, A., III, 403. Thyroid function and carbohydrate metabolism, A., III, 492.

Vacuodri Fruit Corporation. See Moore, C. C.

Vacuum Oil Co. See Auld, S. J. M. Vacuum Process Mineral Extracting Co.

See Elian, A.J.Vaders, E., drilling tests with free-cutting brass and various aluminium alloys, B.,

569. Aluminium bearing metals, B., 1222.

Vadner, C. S., manganese dioxide, (P.), B., 1202.

Vadova, V. A. See Sadikov, V. S. Välkkilä, Y. See Kronholm, G. Vaes, J. F. See Thoreau, J. Vageler, P. See De Camargo, T.

Vagenberg, D., two forms of salvarsan base. I., B., 841.
Vago, G. See Küntzel, A.

Vagramian, A. T., influence of electrolyte concentration on number of crystallisation nuclei formed during electrolysis, A., I, 625.

and Alemian, S. A., rule governing electrocrystallisation of metals, A., I, 625. Vahidy, T. A. See Pandya, K. C.

Vahlkampf, E., evaluation of meat meals from their bone content, B., 182.

Vahlquist, B., esterase activity of human blood-plasma, A., III, 67.

Vahlteich, E. M., Funnell, E. H., MacLeod, G., and Rose, M. S., egg yolk and bran as sources of iron in human dietary, A., III, 131.

Vahlteich, H. W., Haurand, C. H., Neal, R. H., and Best Foods, Inc., margarine and oil for use therein, (P.), B.,

Haurand, C. H., and Perry, G. A., cucumber salting, B., 183.

Vail, W. E. See Du Pont de Nemours & Co., E. I.

Vaille, C. See Chabanier, H., and Hazard, R.

Vaillé, R. Seo Trillat, J. J.

Vainschtein, G. M., determination of transparency of river and filtered water at a distance, by means of cuprous oxide photo-electric cells, B., 1139.

Vaisberg, R. G. See Plotnikov, V. A. Vaisfeld, P. G. See Orlov, N. N. Vajda, A. M. See Freudenberg, W.

Vajda, L., change of phagocyte under influence of sodium bromide or iodide, A., Ill, 2.

Vakac, R., compression testing of asphalt

paving mixtures, B., 676. Vaksberg, N. M. Sec Bergman, A. G.

Vakulin, D., yield of essential oil by a new variety of dragonhead (Dracocephalum Moldavica, L., var. hexagonum, D. Vakulin) from different seed samples, A., III, 332. Hibiscus as a source of oil, B., 585. Valade, P., carcinogenic action of methyl-

cholanthrene, A., III, 256. Valaer, P., foreign and domestic rum, B.,

1258.

Valasek, J., effect of chemical combination on X-ray emission spectra, A., I, 158. X Ray emission spectra of sulphides and sulphates, A., I, 387.

Valdes, L. See Del Fresno, C.

Valdez, R., and Camps-Campins, F., determination of ash content of sugar products; standardised sulphated ash method, B., 275.

Valdiguié, P., and Dachary, total sulphur in normal human keratinous tissues, A., III, 340.

See also Garipuy, A.

Valencien, C., and Terrier, J., determination of rice flour in table mustard, B.,

Valenkov, N., and Porai-Koschitz, E., X-ray investigation of the glassy state,

A., I, 287.

Valensi, G., kinetics of oxidation of metals forming two oxides, A., I, 88. Mechanism of diffusion through protective oxides and influence of pressure on rate of oxidation of nickel, A., I, 88. Kinetics of oxidation of copper at high temperatures, A., I, 142. Oxidisability of nickel, A., I, 250. Oxidation of nickel spherules, A., I, 314.

See also Chauvenet, (Mme.) G. Valentenyi, A. Sce Dvorzsák, H. Valentin, F., $\beta\epsilon$ -anhydromannono- γ -lactone, A., II, 442.

Sec also Votoček, E.

Valentin, H., chromatographic adsorption analysis in pharmacy. V. Examination analysis in pharmacy. V. of coffee extracts, B., 975.

Valeschkevitsch, A. See Schpitalni, A. Valette, G., hemolytic action of Convolvulaceæ resins and their hydrolysis products, A., III, 309. Hydrotropic action of Convolvulaceæ resins on latitish A. III. 200. Physiological

lecithin, A., III, 309. Physiological action of drastic purgatives. I. Resins of the Convolvulacee, A., III, 478.

Valette, (Mlle.) S. Sec Charriou, A. Valik, L., and Givaudan-Delawanna, Inc., anhydrous aluminium chloride, (P.), B., 543.

Valikov, S. J. See Elkin, D. I. Valjaschko, N. A., and Borisiuk, J. G., rotatory dispersion of essential oils, B., 980. Ükrainian raw materials of plant origin. II. Essential oils. III. Rectification of peppermint oil, B., 1268.

Vallance, J. M., laundry soaps, B., 1233. Vallarta, M. S., cosmic rays and magnetic moment of the sun, A., I, 341.

Valle, J. R., test for prolactin based on films of mucous membrane of the crop, A., III, 491.

Vallet, P., study of chemical systems by observing changes in weight at linearly varying temperatures. I. and II., A., I, 252, 314. Tetrahydrate of zinc sulphate, A., I, 257.

See also Rencker, E. Valouch, M.A. See Hrdlicka, J.

Vámos, L., fungal enzymes; proteolytic and carbohydrate-splitting enzymes, A., III, 220. Öxygen requirement of fungi, A., III, 223.

Van Ackeren, P. See Koppers Co. of Delaware.

Vanadium-Alloys Steel Corporation. See McKenna, P. M.

Vanadium Corporation of America. See Strauss, J.

Van Alstine, H. E. See Keutmann, E. H. Van-Beckum, W. G., and Ritter, G. J., chemical composition of wood, B., 766.

Vance, A. J., Moore, R. C., a. Manufg. Co., dryer, (P.), B., 629. and Coe

Vance, G. M., and Vance, L. R., oil-heating apparatus, (P.), B., 521. Vance, J. E. See Foote, H. W., and

Murphy, G. M.

Vance, L. R. See Vance, G. M. Vancea, P. See Michail, D.

Van Cleave, A. B., and Rideal, E. K., catalytic union of hydrogen and oxygen on copper and copper-gold alloys, A., I, 315.

Vand, V., changes in resistance, with time, of thin sputtered metal layers, A., I, 69.

Vandecaveye, S. C., and Bond, L. V., yield and composition of lucerne as affected by various fertilisers and soil types, B., 168.

and Katznelson, H., bacteriophage as related to the root nodule bacteria of lucerne, A., III, 36.

Vandendries, C. See Soc. Carbochimique. Vanderbilt Co., Inc., R. T., rubber compositions, (P.), B., 703.

See also Larson, L. H. Van der Pyl, L. M., leather [gas-meter] diaphragm dressings, B., 747. Vandervelde, A., furnaces, (P.), B., 855.

Vanderwaeren, J. See Decoux, L. Van der Wyk, A. J. A. See under Wyk, A. J. A. van der.

Vandone, I., fluxing of rock asphalt with tar, B., 1055.

Van Duzen, R. E. See Hambleton, B. F. Van Duzer, R. M., pipes, valves, and turbines for high-temperature steam, B.,

Van Dyke, H. B., and Li, R. C., standardisation of digitalis. II. Relation between laboratory methods of assay and potency determined by experimental cumulative poisoning and clinical standardisation, B., 618.

See also under Dyke, H. B. van.

Van Gelderen, F. M. See V. G. Manufg. Co. Vanghelovici, M., reduction of cholic acids by Bouveault's method, A., II, 100. and Parhon, F., origin of cholesterol in

the animal organism, A., III, 130.

Van Horn, A. L. See Scott, R. D.
Van Horn, K. R., [X-ray study of] constitution of alloys, B., 801.
See also Sykes, W. P.

Vaniaschina, V. P. See Gavasch, E. I. Vanick, J. S., hardening of cast iron by heat treatment, B., 789.

Vanin, I. I., and Tschernojarova, A. A., transposition of the double linking in Δ^{ϵ} - and Δ^{θ} -oleic acid, A., II, 227. Transformations of linaIool, connected with its stereoisomerism, A., II, 295.

Vankeirsbilck, N. See Gevaert Photo-Preducten N.V.

Van Lente, K. See Ferguson, A. L.

Van Marle, D. J., and Buffalo Foundry & Machine Co., drying of inorganic salts and sludges, (P.), B., 342.

Van Meter, R. A., effect of late summer and autumn applications of nitrogen on fruit production in the strawberry, B.,

Vannah, H. P. See Richter, G. A. Van Nuys, C. C., and Air Reduction Co., separation and recovery of krypton and xenon from gaseous mixtures containing them, (P.), B., 669.

Van Os, D., and Dykstra, K., examination of essential oils by measurement of tho ultra-violet absorption, B., 841.

See also under Os, D. van.

Vanossi, R., and Ferramola, R., cerimetric determination of glucose in 0.01 c.c. of blood, A., III, 54.

Van Rolleghem, R., and Comp. Internat. de Prod. Ignifuges & Calorifuges, heatinsulating and fireproof materials, (P.), B., 739.

Vanscheidt, A., Erluikova, T., Itenberg, A., Raines, M., and Eigel, A., mechanism of condensation of phenol with formaldehyde, B., 1370.

Van Scoyk, W. V., moulder for micro-baking, B., 609.

Vanselow, A. P. See Chapman, H. D. Van Slyke, D. D., Page, I. H., Hiller, A., and Kirk, E., urea secretion. 1X. Comparison of urea clearances calculated from the excretion of urea, of urea plus ammonia, and from nitrogen determination by hypobromite, A., III, 202.

See also Page, I. H.

Vanstone, E., composition and nutrient value of grass, B., 184, 283.

Van Vleck, J. H., scattering of slow neutrons by heavy atoms, A., I, 161. Rare-earth spectra in solids, A., I, 165. Influence of dipole-dipole coupling on the specific heat and susceptibility of a paramagnetic salt, A., I, 353. Rôle of dipole-dipole coupling in dielectric media, A., I, 446.

Van Voorhis, S. N., artificial radioactivity of copper, a branch reaction, A., I, 59.

Van Vorst, A. R. See Wray, R. I.

Van Wagenen, A. See Wilgus, H. S., jun. Vanzetti, B. L., lignin and resin, A., II, 287. Problem of potassium salts in saline waters, B., 93.

and Dreyfuss, P., configuration of olivil and isoolivil, A., II, 417.

Vanzetti, G., mol. wt. of proteins, A., I, 240. Vapor Car Heating Co., Inc. See Smith, W. M.

Vapor Treating Processes, Inc. See Lachman, A., and Rich, P. C.

Varadanam, C. I. See Dhar, N. R. Varahalu, T., sugar cane. II. Performance of canes as influenced by environmental conditions, B., 169. Physicochemical studies on sugar-cane jaggery, B., 828.

Várallyay, G., variations in the ammonia and nitrate content of soils, B., 477. Determination of fertiliser requirements

of soils, B., 1101.
Varasova, E. N., Mischtschenko, K. P., and Frost, O. I., thermodynamic properties of saturated aqueous solutions of salt systems. I. Specific heat and vapour pressure of the system BaCl2-CaCl2-H2O at 25°, A., I, 463.

Varela, M. E., maximum concentration of urine; its investigation and diagnostic value in renal insufficiency, A., III, 169.

Varga, E. See Gerendás, M.

Varga, F., germicidal action of combined solutions of potassium permanganate and mercury oxycyanate, A., III, 148.
Varga, F. B. See Molobad, M. C.
Varga, G. Sec Chrétien, A.
Varga, J., and Nyul, G., Hungarian fuel

industry, B., 636.

Varga, O., preservation of foods by ultrashort electric waves, B., 1128. Poisoning of cheese by Bacterium coli, B., 1400.

Varlamov, V., and Davidova, N., separation of unsaponifiable material from solutions of synthetic-acid soaps, B., 57.

Varley, J. C., germicidal power of oil sprays, B., 624.

and Reddish, G. F., phenol coefficient as a measure of the practical value of disin-

fectants, B., 504.

Varma, P. S., and Krishnamurti, M.,

Sologenation. XVII. Bromination

A. II. 332. and iodination of diphenyl, A., II, 332.

Sahay, V., and Subramonium, B. R., halogenation. XVIII. Halogenation

of ethylbenzene, A., II, 331. Varney, R. N., Gardner, M. E., and Cole, A. C., ionisation of mercury vapour by positive potassium ions, A., I, 591.

See also Mitchell, A. C. G. Varschavski, A. N., and Jasinskaja, G. I., nuneralogical composition and properties

of Tichvin bauxites, A., I, 334. Varteressian, K. A., and Fenske, M. R., liquid-liquid extraction; exact quantitative relations, B., 1. Graphical design methods applied to fractional extraction of the system methylcyclohexane-aniline-n-heptane, B., 756.

Vartiovaara, \hat{U} ., metabolism of soil fungi,

B., 715.

Vas, K., and Csiszar, J., acid, volatile acid, and aroma formation in butter cultures and starters, B., 612.

Vásárhelyi, I, von, is there a parallelism between trypanocidal and spirochatocidal effect of arsenobenzene compounds? A., III, 228.

Vasátko, J. See Dědek, J.

Vasel, A., kaolinitic weathering of felspar rocks, A., I, 206.

Vashenin, I., reasons for superior aftereffects of sylvinite and carnallite [as fertilisers] compared with potassium chloride, B., 1385.

Vašiček, A., technique of electro-osmotic measurements, A., I, 100.

Vasilevski, P. F. Sec Levando, J. I.

Vasiliadis, C., steam method for removal of adsorbed cations from the soil complex, B., 1098.

Vasiliev, K.A., determination of aluminium in presence of fluorine compounds by means of hydroxyquinoline, A., I, 532. Vasiliev, V. V., bromine content of the water

of the Sea of Japan, A., I, 584.

Vasiliu, C. See Baltaceano, G. Vasiliu, G. See Procopiu, S.

Vaskevitsch, D. N. See Balandin, A. A.Vassermann, I., Heracleum lehmannianum, B., 729.

Vasseur, A. See Chauveau, L.

Vassiliades, C., condensation of chlorohydrins with piperidine, A., II, 348. See also Karantassis, T.

Vassiliadis, P. C., action of chloroform on flagellatory agglutination-H of vibrios, A., III, 115.

Vassiliev, A. See Poljakov, K.

Vassiliev, A. S., swelling of sand, B., 344. Vassiliev, B., determination of rate of melting of animal fats, B., 364. Vassiliev, B. B., system Na₂CO₃-K₂CO₃-

H₂O at elevated temperatures, A., I,

Seferovitsch, J. E., and Fridman, V. M., preparation of soda by carbonation of sodium chloride in liquid ammonia, B., 1042. Preparation of soda by carbonation of sodium chloride in liquid ammonia, B., 1198.

See also Achumov, E. I., Andreeva, O. I., and Bergman, A. G.

Vassiliev, L. A. See Zilberkveit, E. K. Vassiliev, P. S. See Deschalit, N. M. Vassiliev, S. S. See Eremin, E. N.

Vassy, E., variations of absorption coefficients of ozone and the temperature of the upper atmosphere, A., I, 110.

See also Barbier, D., and Servigne, M. Vastagh, G., determination of chloretone in medical preparations, B., 1131.

Vasudeva, \hat{R} . \hat{S} ., effect of one organism on the parasitic activity of another, A., III, 485.

Vater, G., Richardt, F., and Than, A., Dessau vertical retorts with continuous water-gas production in separate chambers at Rostock gasworks, B., 405.

Vatkina, S. G. See Platkovskaja, V. M. Vaubel, R. See Strohecker, R.

Vaughan, N. B., inverse segregation, A., I,

See also Alexander, W. O. Vaughan-Jackson, M. W. Sec Bell, R. P. Vaughen, J. V. See Du Pont de Nemours & Co., E. I.

Vaughn, R., and Levine, M., hydrogen sulphide production as a differential test in the colon group, A., III, 225, 357.

Vaughn, T. H., Hennion, G. F., Vogt, R. R., and Nieuwland, J. A., alkyl acetylenes and their addition compounds. XIX. Preparation and alkylation of metal acctylides in liquid ammonia, A., II, 362.

See also Carbide & Carbon Chemicals Corp.

Vauhkonen, T. See Routala, O. Vaupell, C. W., mercury deposits of Huitzuco, Guerrero, Mexico, B., 1221.

Vautier, $L.\ P.\ G.$, Fays, R., and Comp. des Textiles Artif., artificial sponges, (P.), B.,

Vaux, G., and Bennett, H., X-ray studies on pyrolusite (including polianite) and psilomelane, A., I, 433.

Vavilov, N., colorimetric determination of

chromate solutions, A., I, 580.
Vavilova, E. G. See Miloslavski, N. M.
Vavon, G., and Anziani, P., 2:6-dipropylcyclohexanols, A., II, 287.

and Bolle, $J_{\cdot,\cdot}$ condensation of aromatic hydrocarbons with methyl chloromethyl ether; alkylation of aromatic rings, A., II, 372.

and Chilouet, I., bornylamines, A., Il, 108. Menthylamines, A., II, 108.

Vavrinecz, G. See Roboz-Rosenblüh, E. Vayda, L. L., and Bacharach Industrial Instrument Co., analysis of gases, (P.), B., 997.

Vazson, J. F., electricity and the coking industry, B., 744.
Vdovenko, V. M., adsorption of ions, and

the potential rise at the interface solid electrolyte-solution, A., I, 358.

and Malov, N. A., influence of gelatin on transport numbers and conductivity of hydrochloric acid and potassium chloride, A., I, 139.

See also Nikolski, B. P. Veal, J. R., and McCord, W. M., bloodoxygen changes after passive vascular exercise of the extremities, A., III, 247.

Veatch, J. O. See Partridge, N. L.Vechsler, V. I., and Biberhall, A. V., selfexcitation in Geiger-Müller counters, A., 1, 341.

Biberhall, A. V., Isaev, B., and Chruscht-schev, V., X-ray defectoscope, A., I,

Biberhall, A. V., and Ivanov, M. P., measurement of intensity of X-rays, A., I, 266.

Vedenejeva, N., Grum-Grshimailo, S., and Volkov, A., interference method of determining refractive index with a micro-

scope, A., I, 49. Vedenski, A. A. See Latschinov, S. S. Vedenski, L. E., spectral analysis of crude aluminium and its alloys, B., 687.

and Mandelstam, S. L., spectral analysis of electron for aluminium, zine, and manganese, B., 687.

Veedip. Ltd., and Sutton, S. D., surface treatment of [latex] rubber, (P.), B., 474. Veen, A. G. van, fish as food, B., 389.

and Baars, J. K., constitution of toxollavin, A., II, 351.

See also Hijman, A.J.

Veen, H. van der, protection of [steel] pipes in soil, B., 1351.

Vega Manufacturing Corporation. See Rob-

bin, L. Vegard, L., red and sunlit auroras and state of the upper atmosphere, A., I,

55. Intensity variations of green and red oxygen lines and presence of the ϵ system in aurora and light of the night sky, A., I, 385.

Végh, P. von, determination of blood-creatinine by the Lange-Roth photometer, A., III, 412.
Vegrin, M. L. See Popov, K. M.

Veh, R. von, and Söding, H., growth-substance and germination of fruit-tree seeds, A., III, 330.

Vehrs, G. R., hydrodynamics of analgesics in the sub-arachnoid fluid of man; diazotised procaine in artificial dural sacs, A., III, 25.

el, S., determination of semi-carbazones, A., II, 130. Enzymic hydrolysis of trimethylcarbinol-β-d-Veibel, S., glucoside, A., III, 482.

and Lillelund, H., enzymic hydrolysis of some \$\textit{\beta}_{\text{glucosides}}\$ of tertiary alcohols, A., III, 30.

Veichhertz. See under Weichherz.

Veidemanis, A., extraction of sulphur from gypsum, B., 665.

Veihmeyer, F. J., and Hendrickson, A. H., effect of replacement of other cations by sodium on dispersion of soils, B., 1098.

Veil, (Mlle.) S., electrometric potential and constitution of electrolytes, A., I, 32. Construction of two-liquid cells containing gelatin, A., I, 33. Cells with dissimilar electrodes, A., I, 140. Potential gradient of gelatin under tension, A., I, 415.

Veinberg, G. J., determination of oxygen in steels, B., 1062.

and Proschntinski, S. I., determination of hydrogen in steels, B., 1062.

Veinberg, Z. A., reactions of 2-naphthylamine-6:8-disulphonic acid (amino-Gacid) with diazo-compounds, B., 329.

Veingerov, M. L., sensitivity of doublelayer radiometer, A., I, I51.

Veis, J. D. See Martinov, M.

Veiselberg, K. B., and Babenko, E. M., bitumin-A and C from Alexandria lignite, B., 516.

Veitch, F. P. See Jarrell, T. D. Veith, E. See Slatineanu, A.

Vieth, H_{\bullet} , and Schröder, E_{\bullet} , m.-p. diagrams of binary systems of condensed gases, A., I, 412.

See also Eucken, A.

Veith, IV., electron excitation and ion reflexion on bombardment of metals with K⁺ ions, A., I, 338.

Veitzer, J. I., experimental investigation of light scattering by organosols of metals in media of varying refractivity, A., I, 614.

See also Gurevitsch, I. D.

Veitzman, A. E.: See Schorigin, P. P. Veitzman, M. A. See Eiderman, M. M. Velculescu, A. I. See Atanasiu, I. A. Velde, A. J. J. van de, biochemical pro-

perties of fresh and tainted fish, B., 492. Veldkamp, C., use of Collactivit in the sugar industry, B., 962.

Veldkamp, J., and Knol, K. S., radio-activity induced in lithium by neutrons, A., I, 161.

Vellinger, E., and Grégoire, A., influence of surface impurities on measurements of the interfacial tension, A., I, 300.

Velluz, L. See Dnfraisse, G.

Velluz, (Mme.) L. See Dufraisse, C.

Venable, C. S., rayon and recent developments, B., 655. Venable, W. M., spectrum of hydrogen,

A., I, 385.

Venderovitsch, A., and Vorobjov, A., influence of a concentrated space charge on the electrical insulation of calcite,

Venet, J. See Salmon-Legagneur, F. Vener, J. M. See Kondrateev, E. V.

Venkatachalam, V., routine test for detection of highly hardened oils and mutton and beef fats in butter and ghee, B., 1399.

Venkatanarasimhachar, N., and Doss, K. S. G., selective adsorption on silica gel from pyridine-alcohol mixtures, A., I, 510.

Venkataraman, K. See Dhingra, D. R., and Mitra, N. C.

Venkataramayya, S., improving the filterability of [sugar-juice] sulphitation scums, using bagasse carbon, etc., B., 1392.

Venkataramiah, H. S., magnetic susceptibility of copper amalgam, A., I, 509. Venkatarao, C. See Seshadri, T. R.

Venkatasubban, A., colloid-chemical aspects of paint manufacture, B., 810.

Karnad, R., and Dastur, N. N., urease activity of germinated seeds, A., III, 68.

Venkatesachar, B., Doppler effect in canal rays, A., I, 542.

Venkateswaran, C. S., Raman spectra of sulphur and phosphorus. I. Polarisation and molecular structure. II. Lattice oscillations, A., I, 9. Raman effect and molecular structure, A., I, 496. O-H Raman frequency in inorganic acids, A., I, 496. Intensity of Raman lines due to intermolecular oscillations, A., I, 598. Jenn, R. J., concentration and filtration in pulp and paper industry, B., 769.

Vennerholm, G. See McCarroll, R. H. Vennesland, B., Blauch, M. B., and Saunders, F., proteins. V. Crystalline globulin from the Paradise nut, Lecythis

zabucayo, A., III, 162. Venning, E. H., gravimetric determination of sodium pregnanediol glycuronate (an excretion product of progesterone), A., III, 361.

Evelyn, K. A., Harkness, E. V., and Browne, J. S. L., determination of cestrin in urine with the photo-electric colorimeter, A., III, 402.

See also Browne, J. S. L.

Ventura, E. See Artom, C. Venturello, G. See Goria, C., and Milone,

Ventures, Ltd. See Alexander, P. P. Venus-Danilova, E. D., aldehydes and hydroxyaldehydes of the polymethylenic series. II. Condensation products of III. Transformations cuclopentanone. of cyclopentanealdehyde. IV. Isomeric transformations of a-hydroxycyclo-pentanealdehyde. V. Bromo- and hydroxy-hexahydrobenzaldehyde, A., II, 103, 195,

Vepritzkaja, V. F., analysis of carborundum and of refractory carborundum articles, B., 346.

and Gurevitsch, M. L., determination of alkali in silicates by the Pukall method, B., 1049.

Verbanc, J. J. See Kranzfelder, A. L.Verberg, C. Sec Gen. Electric Co. Verbo, P. P. See Kartzev, V. N.

Verbolovitsch, P. A., influence of training on calcium and magnesium content of rabbit, pigeon, and chicken muscles, A., III, 347.

Vercellana, G., trypsin, cathepsin, amylase, and lipase of cancerous tissues and in carcinomatous blood, A., III, 123. Hydrolase content of certain bacteria, A., III, 489.

Vercellone, A., and Mamoli, L., biochemical hydrogenation of androstanedione, A., III, 402,

See also Klopstock, F., and Mamoli, L. Verdi, T. See Crippa, G. B.

Verein der Zellstoff- & Papier-Chemiker & Ingenieure, testing sulphite spent liquor, B., 894. Microscopical detection of resin in chemical pulp, B., -1035.

Ver. der Zellstoff- & Papier-Chemiker & -Ingenieure, Fibre Analysis Committee, assessing mechanical parchmentising

ability of pulps, B., 26. Ver. der Zellstoff- & Papier-Chemiker & -Ingenieure, Strength Testing Committee, standard method for determining pulp strength, B., 769.

Vereinigte Aluminium-Werke Akt.-Ges., Kobolb, O., and Verein. Deuts. Metallwerko, Akt.-Ges. Zweigniederlassung Heddernheimer Kupferwerk, bimetallic electrical trolly wire, (P.), B., 456. See also Fulda, W.

Verein. Deutsche Metallwerke Akt.-Ges. Zweigniederlassung Heddernheimer Kupferwerk. See Verein. Aluminium-Werke

Verein. Edelstahl Akt.-Ges., hard metal alloys, particularly for tools, (P.), B., 457.

Glanzstoff-Fabriken, Verein. Akt.-Ges.. device for use in artificial-silk spinning machines for warding off acid splash and spray and for simultaneously preventing crystallisation of spinning-bath solutions on rapidly running filament guiding rollers, (P.), B., 128.

Verein. Leichtmetallwerke Ges.m.b.H., increasing resistance of aluminium alloys to corrosion, (P.), B., 253. Clad aluminium alloys, (P.), B., 458, 692.

Verein. Stahlwerke Akt.-Ges., improving structure of steel products [rails], (P.), B., 357. See also Scheil, E.

Verein. Strohstoff-Fabriken, slabs from pulp of fibrous material, (P.), B., 29. Vereschnia, P. F. See Tananaev, N. A.

Vereschtschagin, L. F., Schubnikov, L. V., and Lasarev, B. G., magnetic susceptibility of the control of the co bility of metallic cerium, A., I, 122. Magnetic susceptibility of metallic cerium and prascodymium, A., I, 229. Vereschtschagina, N. G. See Schorigin,

Vereycken, W. See Itterbeek, A. van. Verezemskaja, E. M. See Voitova, E. V. Verge, J., and Thieulin, G., milk infected with tuberculous bacteria, B., 612.

Vergne, H. Sec Lumière, A. Vergnoux, (Mlle.), A. M. See Auméras, M. Verhaeghe, A., soup concentrate, (P.), B., 495.

Verhaeghe, J., band spectrum of MgO in ultra-violet, A., I, 392.

Verhoeff, J. A., paint spraying and precautions against dangers therein, B., 944. Verhoek, F. H., strength of acids in formamide, A., I, 135.

Verhoog, M. J. See Collier, W. A.
Verhoogen, J., monoclinic "hypersthene" from the Cascade lavas, A., I, 101.

Verishnikov, P. See Dubovitzki, A. M. Verkade, P. E., Lee, J. van der, and Alphen, A. J. S. van, fat metabolism. X. Fate of triglycerides of saturated

monobasic acids in dogs, A., III, 260. Lee, J. van der, De Quant, J. C., and Zuydewijn, E. de R. van, synthesis of glycerides. II., A., II, 439.

Lee, J. van der, and Meerburg, (Frl.) W., syntheses of glycerides. III., A., II, 226. β-Triphenylmethyl derivatives of glycerol, A., II, 318.

See also Holwerda, K.

Verleger, H., rotation-vibrations of polyatomic molecules in the photographic infra-red, A., I, 166.

See also Blum, E., Herzberg, G., and Stark, J.

Verleysen, A., and Manneback, calculation of fundamental plane modes of vibration of the molecules C_2H_4 , C_2D_4 , and $C_2D_2H_2$, A., I, 223. See also Manneback, C.

Verma, M. R. See Bhatnagar, S. S.Verman, L. C., viscosity of lac and hard lac

resin solutions, B., 1085. Vermehren, E. See Lundsteen, E.

Vermeulen, D., Wassink, E. C., and Reman, G. H., fluorescence of photosynthesising cells, A., III, 486.

Vermeylen, J., brewing value of certain barley varieties, B., 719.

Vernadsky, W. I., Brunowsky, B. K., and Kunasheva, C. G., concentration of mesothorium-I by duckweed (Lemna), A., III, 441.

Vernazza, E., action of concentrated sulphuric acid on cyclotrimethylenetrinitroamine (T₄), B., 732.

Verne, J. See Blnet, L.

Verner, A. P., and Kovalev, A. A., nitrogenfixing power of Bact. radicicola, A., III,

Vernes, A., specific substance of syphilitic fluids, A., III, 15. Chemistry and prophylaxis, A., III, 121.

Vernon, A. A., and Brown, B., experiment on a ternary system of liquids, A., I, 298.

and Ross, H. K., characteristics of residue from cracking of castor oil, B., 257.

Vernon, H. C. See Chilton, T. H. Vernon, T. R., surface moulding of butter,

B., 388. Internal moulding of butter, B., 723. Influence of moulds and yeasts on keeping quality of butter, B., 972. Vernon, W. H. J., film formation in corrosion

processes, B., 1067.

Vernotte, P., simultaneous determination of the specific heat and thermal conductivity of insulators; signal method, B., 802.

Véron, M., inflammability limits of air-gas mixtures in contact with a hot point, B., 1155. Ultimate analysis of solid and

liquid fuels, B., 1292.

Verona, O., and Bonaventura, G., influence of partial removal of embryonic reserves on plant development and probable presence of a growth factor, Ā., III, 444.

and Saggese, V., effect of animal extracts on plant growth, A., III, 502.

Verona, R., and Fostiropol, C., refining of petroleum products by solvents, B., 314.

See also Fostiropol, C.

Verschaffelt, J. E., application of thermomechanics to electrochemistry, A., I, 82. Free energy as basis of thermodynamics, A., I, 82. Affinity, A., I. 415. Surface tension and thermodynamics, A., I, 512. Verschinski, S. A. See Nikitin, E. K. Verschkovski, V. J. See Aidinjan, N.

Versen, F., suggested standards for testing

of safety glass, B., 137. Versluys, J., Michels, A., and Gerver, J., viscosity of saturated methane-oil solutions under pressure, B., 205.

Verstraete, E. O. K., difficulties in determination of $p_{\rm H}$ of saponin sols, B.,

See also Ruyssen, R.

Vertzman, J. L., determination of free alkalis in tin electrolytes, B., 1069.

Verweel, H.J. See Driel, M. van.Verwey, E. J. W. See De Boer, J. H.

Verzar, F., Hübner, H., and Laszt, L., lactoflavin combined with phosphoric acid after adrenalectomy, A., III, 436. and Laskowski, M., changes in bones due to poisoning by iodoacctic acid, A., III. 476.

and Laszt, L., sodium and water metabolism in relation to disturbances of carbohydrate metabolism after adrenalectomy, A., III, 73. Adrenal cortex and fat transport, A., III, 73. Vitamin- B_2 and the hormone of the adrenal cortex, A., III, 439.

and Süllmann, H., production of phosphoric esters in the intestinal mucous membrane during absorption, A., III,

Szécsényi-Nagy, L., Haffter, C., and Wirz, H., tonus of diaphragm and its relation to smooth muscle tonus in the lungs, A., III, 477.

and Wirz, H., selective glucose absorption, A., III, 421.

See also Erlenmeyer, H_{\bullet} , Judovits, N_{\bullet} , and Laszt, L.

Verzner, V., taking electron diffraction photographs with simultaneous irradiation of two samples, A., I, 152.

Veselova, A. V. See Schemiakin, F. M. Veselovski, V. S., and Pertzov, V. N., adherence of bubbles to solid surfaces, A., I, 179. Production of artificial graphite by graphitisation of coal, Mechanical properties B., 860. of powders; relationship of the mechanical properties of clay to its state of aggregation, B., 911.

and Seljaev, I. A., mechanical properties of powders; influence of capillary pressure on drying of clay, B., 911.

Veselý, V., and Medvedeva, A., dipyrazolobenzenes, A., II, 308. Veshenkova, M. S. See Alimarin, I. P.

Vesselovsky, O. See Zunz, E. Vestal, C. M. See Shrewsbury, C. L.

Vesterdal, H. G. See Standard Oil Development Co.

Vestin, R., enzymic conversion of codehydrogenase-I into -II, A., III, 480. and Euler, H. von, easily hydrolysed phosphate from cozymase, A., III, 98.

Action of alkali on cozymase, A., III, 270.

Schlenk, F., and Euler, H. von, determination of the constitution of cozymase; isolation of adenosinediphosphoric acid as product of fission, A., ÎII. 313.

See also Euler, H. von.

Vestling, C. S. See Lundberg, W. O. Vészi, G., chemiluminescence with two organic reactions, A., II, 119.

Vetrov, A. S., iodometric determination of potassium nitrate, A., I, 425. Binary systems containing carbamide, A., I, 464.

Vetscher, A. S., preparation of carotene concentrates and carotene from carrots, B., 492.

Vetter, H., lactoflavin, A., III, 495. See also Kuhn, R.

Vetter, J. J., and Natural Products Refining Co., chromic acid, (P.), B., 542.

Vezian. See Dufrency, J. Vial, J. See Hermann, H., Jourdan, F., and Morin, G. Vialard-Goudou, A. See Mentzer, C.

Vialle. See Bosch, van den. Viallier, J. See Arloing, F.

Vian, A. See Moles, E.

Vicher, E. E., Meyer, E., and Gathercoal, E. N., phenol-resistance of Staphylococcus aureus, A., III, 397.

Vichrova, G. Seo Tzukervanik, I. P. Vick, F. A. See Johnson, M. C.

Vickers, H., preservation of food-stuffs in sealed containers, (P.), B., 1405.

Vickers, J. B. See Raine, T., and Stevenson, W. W.

Vickers, P. See Eagle, H.

Vickers, V. R. S., Tinley, N. L., and Bryant, D. M., [report of] Department of Agriculture, B., 272.

Viokers-Armstrong, Ltd., and Parke L. D., grinding mills, (P.), B., 1146. and Parker, and Sky, J. D., scaling devices for rotary kilns, dryers, etc., (P.), B., 738.

Viokerstaff, T. See Spring, F. S. Vickery, H. B., Pucher, G. W., Wakeman, A. J., and Leavenworth, C. S., metabolism of amides in green plants. I. Amides of the tobacco leaf, A., III,

See also Nolan, L. S., and Pucher, G. W. Victor, J., and Potter, J. S., age of host and cell metabolism in lymphatic leucæmia in the mouse, A., III, 19. Mouse leucemia, A., III, 124.

Victor Chemical Works, phosphorio esters of aliphatic alcohols, (P.), B., 220*.

See also Janota, J., jun., Knox, W. H., jun., McDonald, G. A., and Zinn, R. E. Vidacovitch, M. See Santenoise, D. Vidal, E. N., and Samson, G. A., Bureau

of Reclamation concrete [water-]permeability tests, B., 675.

Vidal, J. M. See Duperier, A. Vidal, L., and Goldsmid, P., microscopical analysis of papers containing wool, B.,

656. Vidal, P. See Grumbach, A.

Viehoever, A., Daphnia as a biological reagent, A., III, 137.

and Cohen, I., mechanism of strychnine action. I. Physiological evaluation, A., III, 350.

Vieille, P., summary of data on conservation of powder V [powder B], B., 1279.

Vièles, P. See Durand, J. F., and God-chot, M.

Vielhaber, L., determination of thermal conductivity of enamel, B., 548. Removal of enamel, B., 548. Position of [iron] enamelling technology, B., 1339.

Vielly, $J_{\cdot \cdot}$, and Harder, $J_{\cdot \cdot}$, actinic irradiation of milk, B., 1260. Viennois, P. See Mouriquand, G.

Vierhapper, F. See Späth, E.

Vierow, E. A., operation of regenerative furnaces, (P.), B., 738. Regenerative furnaces, (P.), B., 738.

Viertel, O., determination of cellulose wool in spun or woven mixtures, B., 768. Determination of rayon and staple fibre in mixed materials, B., 1185.

Vieux, G. See Roehaix, A. Vieux, M. R., tests on coal-flotation plant, B., 743.

Vieweg, R., physical requirements of synthetic materials, B., 154.

See also Brecht, W. Vigdortschnik, I. M., velocity distribution of electrons in a high vacuum under influence of a magnetic field, A., I, 159. Surplus heating of a cathode in a magnetron, A., I, 209.

Vigers, B. E. A. See Imperial Chem. Industries.

Viggiano, J., and Türk, E. F. H., bromine in Argentine flour and wheat, B., 721.

Vigness, I. See Stenstrom, W. Vignoli, L. See Fauchon, L.

Vignos, W. A., six years of observation of chromium [plate] in a job shop, B., 798. Viktorov, M. M. Sco Epstein, D. A.

Viktorov, P. P., purification of substantive

dyes, B., 531.

and Vildt, E. O., influence of naturally occurring admixtures accompanying cellulose on dyeing properties of cotton fibre. I., B., 30.

Vila, A., application of high-vacuum distillation in characterisation of coke and

bitumens, B., 405.

Vilborg, M., optical determination of solubility, A., I, 128. Vilbrandt, F. C. Sec Pilcher, J. M., and

Sweeney, O. R.

Vildt, E. O. See Viktorov, P. P.
Vilenski, M. B., analysis of soda-lime
glass, B., 911.

Vilenski, V. A., and Kastorskaja, T. L., determination of mol. wt. of casein in phenol solutions, A., I, 180. Vilentschik, M. M. See Brusilovski, A. M.

Vilesova, G. F. See Mokruschin, S. G. Villachon, A. See Chevenard, P. Villan, P. See Moles, E.

Villaret, M., Bénard, H., Justin-Besancon, L., and Abadi, A., hemolytic "erythrodialysis," A., III, 337. "Kinelysis," A., III, 337.

Justin-Besancon, L., and Even, R., hamolytograph, A., III, 337.

Justin-Besancon, L., Rubens-Duval, A., and Barbier, P., variations in bloodsugar and glycogen reserves during experimental uræmia in the rabbit, A., III, 258. Interpretation of the disturbances in carbohydrate metabolism during acute experimental uramia in rabbits, A., III, 343.

Villars, D. S. See Standard Oil Co. of

Indiana.

Villegas, V., and Ynalvez, L. A., fertilising constituents in solid excreta of sheep and goats, B., 166.

Villela, G. G., cholesterol in rabbit's skin during experimental hypercholesterolæmia, A., III, 374.

and Junior, R., xanthoma; biochemistry and pathogenesis, A., III, 464.

Vilnjanski, J., and Zeljanski, V., extraction of bromine from sylvinite, B., 133.

Viltner, S. P., and Johnstin, R., photometric determination of urea, uric acid, creatinine, and hæmoglobin in blood of scorbutic guinea-pigs, A., III, 463. Vinal, F. E. See Craig, D. N.

Vinal, G. W. See Craig, D. N.

Vinal, H. N., and Wilkins, H. L., effect of fertiliser applications on composition of pasture grasses, B., 167.

Vinaver, S., iodohydroxyquinolinesulphonic acid, A., II, 431. Piperazine, A., II, 433. Vincent, Herviaux, and Coic, measurement

of the lime capacity of soils; liming of acid soils, B., 1249. Determination of lime requirement in Breton granite soils, B., 1383.

Vincent, C. R., resistant metals, B., 927. Vincent, D. See Florence, G.

Vincent, D. B., dryer, (P.), B., 2. Vincent, G. P., and Mathieson Alkali Works, calcium chlorite, (P.), B., 243. Chlorino dioxide, (P.), B., 669.

Vincent, H., glutathione as an antitoxin for diphtheria and tetanus toxins, A., III,

Vincent, H. B., and Sawyer, R. A., high-speed high-precision microphotometer, A., I, 479. Spectrograph in the iron foundry for rapid and accurate control analysis, B., 564.

Vincent, R. S. See Callender's Cable & Construction Co.

Vincent, T. C., jun., and Page Contracting Co., gas washer, (P.), B., 100.

Vine, H. See LeFèvre, R. J. W.

Vineberg, A.M. See Bowie, D.J.Vinet, E., action of potassium fertilisers on

general vigour of the vine, B., 710. See also Moreau, L.

Vining, C. F., milk-pasteurising assembly, (P.), B., 391.

Vinock, H., determination of sulphur [in

petroleum], B., 1297.
Vinogradov, A. P., chemical composition of organisms as a specific property. III. Manganese in insects (Formicidæ), A., III, 251.

Danilova, V. V., and Selivanov, L. S., fluorine content in the rivers of the U.S.S.R., A., I, 381.

Vinogradov, D. G. See Smirnov, P. V. Vinogradov, K. K. See Tschitschkanov, P.P.

Vinogradov, S. V. See Ribinski, $F. \dot{N}$. Vinogradov, V. N. See Karjakin, J. V. Vinogradova, (Mme.) A. See Perschke, V.

Vinogradova, A. D., and Efremov, N. N., viscosity of the systems phenolmethyl- and -dimethyl-aniline, A., I,

Tichomirova, A. M., and Efremov, N. N., viscosity in the systems phenolaniline and -pyridine, A., I, 295.

See also Efremov, N. N. Vinogradova, A. V., determination of sulphate by Schtscherbatschev's method, A., I, 324.

Vinogradova, E.V. See Terentiev, A.P. Vinogradova, M. See Zinoviev, A.

Vinogradova, O. G., and Roshkov, V. M., methamoglobin builders as antidotes in fluoride poisoning, A., III, 218.

Vinokur, \hat{M} . L., simple laboratory cryptol furnace, A., I, 265.

Vinokurov, L. A. See Levschin, V. L. Vinokurov, M. A., sulphur content of soil organic matter, B., 1097.

See also Seriukov, N. N.

Vinokurov, S. I., and Trotzki, J. A., creatinuria after ingestion of meat during exhaustion of carbohydrate supplies in the organism, A., III, 18.

Vinson, C. G., [fruit] spray residue work in Missouri, B., 1254.

Vinti, S. See Leone, P. Vinz, W., corrosion of aluminium vessels in breweries, B., 926.

Viollier, R., eggs and egg preserves, B., 1124. Virskaja, G. K. See Korolkov, S. I.

Virtanen, A. I., nature of excretion of nitrogen compounds from legume nodules, A., III, 48. Action of small amounts of agar on growth and nitrogen fixation of Azotobacter and on other microbiological processes, A., III, 272. Excretion of nitrogen by leguminous plants, A., III, 499. Microbiology of silage production, B., 726.

Hausen, S. von, and Laine, T., root nodule bacteria of leguminous plants. XIX. Influence of various factors on excretion of nitrogenous compounds from the nodules, A., III, 356.

Virtanen, A. I., and Laine, T., specificity of aspartase, A., III, 68. Formation of β -alanine from aspartic acid by legume bacteria, A., III, 146. Decarboxylation of d-lysine and l-aspartic acid, A., III,

Mansikkala, L., and Tikka, J., formation of butter aroma, B., 80.

and Sevelius, E. R., vitamin-C content of raw and cooked potatoes, B., 835.

and Suolahti, O., secretion of proteases by gelatin-liquefying bacteria, A., III, 354. Production of proteinase by gelatin-liquefying bacteria, A., III,

Virtue, R. W., and Beard, H. H., can injected sulphur be utilised by animal organism? A., III, 175.

and Doster-Virtue, M. E., production of taurocholic acid in the dog, A., III,

Vischnepolskaja, F. See Bauman, M. Vischnevskaja, A. See Kliutsehevitsch, A. Vischnevski, A. N., automatic counter of number of charges of reagents added to superphosphate pulp, B., 1044. See also Teraschkevitsch, V. R.

Visco Meter Corporation. See Eckstein,

G. R.Viscose Co. See Humphrey, J. W.

Vishnoi, S. L. See Mukerji, B. K.
Vishnoi, S. L. See Mukerji, B. K.
Visking Corporation. See Goodman, L. A.,
Hewitt, A. G., and Voss, J.
Visscher, M. B. See Ingraham, R. C.,
and Struck, H. C.

Vissotski, M., [pine-tree] tapping trials in U.S.S.R. II., B., 368.
Vissotzkaja, N. S. See Medvedev, G.

Vita, G., and Bragaloni, L., lecithin and lutein extracts of eggs for hypodermic use, B., 392.

Vita, N., and Sandrinelli, R., influence of certain substances on changes in the nitrogen content of leguminous seeds during germination, A., III, 328.

Vitants, V. Seo Krimberg, R.

Vitcha, J. F. Sec Cary, R. C.

Vitenberg, R. See Bantzelman, N.

Vits, E., continuously-fed [annealing] furnaces, (P.), B., 1070.

Vitschnitsch, M. See Tschahovitsch, X. Vitte, G., presence of a variable quantity

of bromine in human saliva, A., III, 201.

Vittori, C., puzzuolanas and puzzuolanie cements, B., 242, 552, 914.

Vittum, P. W., and Crabtree, J. I., new fine-grain developer, B., 982. See also Eastman Kodak Co.

Vitzeni, M., improvement of railway-tyre steels, B., 918.

Vivanco, F., flavin balance in the animal organism, A., III, 44. See also Edgar, C. E.

Vivian, C. H., high-pressure compressors, B., 854.

Vivian, D. L. See Fink, D. E.

Vivian, R. E. See Gen. Chemical Co.

Vizern, M., and Guillot, J., purity of cacao butter and its mixture with butter from the shell, B., 150.

Vladimirov, A. V., influence of chlorides and sulphates on intake of ammoniaand nitrate-nitrogen by plants, A., III, 237.

Vladimirov, L. V., Brun, M. O., and Schaterkina, Z. F., crystallisation of phosphoric acid obtained by the thermoelectric process, B., 131.

Vladimirova, M. I. See Schemiakin, F. M.

Vladimirski, T. A., problems connected with impact-resilience tests [of metals], B., 688.

and Tschernaschkin, V. J., technical tests for bending and hardening of boiler and furnace steel, B., 446.

Vlasoff, P. I., and Wheeting, L. C. characteristics of certain soil profiles of south-eastern Washington, B., 1248.

Vlasov, A. P. See Tschishevski, N. Vlasov, K. A., theory of desilicification of granitic pegmatites, A., I, 538. Vlassov, A. See Furssov, V.

Vlès, F., physico-chemical properties of electrolytes. I. Relation between physico-chemical and spectral properties of electrolytes, A., I, Relation between molecular stability and p_H, A., I, 613. Properties of metals in relation to the $p_{\rm H}$ scale, and the isopotential point, A., I, 620.

and Heintz, E., infra-red spectrum of proteins, A., I, 218.

and Ugo, A., excitation of fluorescence of cholesterol and of skin, A., III, 7.

Vlezenbeek, H. J., new reaction for paminophenol derivatives and a new sensitive reaction for dulcin in presence of saccharin, B., 876.

Vliet, H. J. van de. See De Bruin, T. L. Vlodrop, C. van, catalytic polymerisation of fatty oils, B., 586.

See also Waterman, H. I.

Vloodt, van der. See Tinbergen, J. C. Vnukova, A. S., dependence of Herschel effect on surrounding gas medium, A., I, 626.

Voano, V. G. See Kurtz, L. J.

Vobach, A. C., Foster, L. P., and Sinclair Refining Co., refining [of petroleum distillates], (P.), B., 1160.

Vodar, B., absorption spectrum of liquid nitrous oxide, A., I, 342. Absorption spectrum of liquid nitric oxide, A., I, **3**92.

Vodopianov, and Antoniadi, forced fermentation of tobacco, B., 840.

prehistoric bronzes of Sardinia, B., 48. and Gallo, M., use of ozone for purification of zinc sulphate solutions, B.,

Vodvishenski, G. S., and Fajsulin, F. F., influence of colloids on cathodic polarisation; electrodeposition of nickel in presence of Paal's mixture, A., I, 188. Voegtlin, C., chemistry of cell growth and

division, A., III, 140.
and Chalkley, H. W., chemistry of cell
division. IV. Influence of hydrogen
sulphide, hydrocyanic acid, carbon dioxide, and some other chemicals on mitosis in Amaba proleus, A., III, 34. Voegtlin, W. L., and Ivy, A. C., substances

reported to affect motility of the gall bladder, A., III, 23. Völksen, W. See Feist, K.

Voet, A., numerical definition of lyotropio series of univalent cations, A., I, 183. Diffuse double layer, A., I, 306. and Elteren, J. F. van, wetting character-

istics of a surface, A., I, 612. See also Abramson, H. A.

Voevodova, V. I. See Kurindin, K. S. Vogel, A. I., and German, W. L., configuration of cyclohexane and methyl-

cyclohexane rings, A., I, 241. German, W. L., and Jeffery, G. H., structure of glutaconic acid, A., II, 398. Vogel, A. I., and Jeffery, G. H., dissociation constant of trans-crotonic acid at 25°, A., I, 411.

See also German, W.L., and Jeffery, G.H.Vogel, F. See Elöd, E.

Vogel, H., determination of kinematic viscosity [of oils] with technical viscosimeters, B., 316.

Vogel, Hans, action of organic bases on sugars and their derivatives, A., II, 324. Vogel, J. C., and Quass, F. W., friability

of South African coals. I., B., 858. Vogel, L., action of metals. V. Effect of metals on alimentary hyperglycæmia, A., III, 22.

See also Häusler, H.

Vogel, O., demonstrating the protective action of pickling inhibitors, B., 920. Pickling experiments with strip steel,

Vogel, R., ternary iron alloys, A., I, 456. Vogel, IV. See Hettche, H. O.

Vogel, Wilhelm, tanning with [sulphite-] cellulose [waste] extracts, B., 817. See also Gansser, A.

Vogel-Jørgensen, M., treatment of mineral slurry in manufacture of cement or lime, (P.), B., 443. Combined drying and grinding of materials, (P.), B., 856. Apparatus for treating solid materials with gases, (P.), B., 1147.

Vogelbusch, W., simplified distillation of

[alcoholic] spirits, B., 1395.

Vogeler, F., comparison of economy of different heat-insulating materials. B.,

Vogelpohl, G., hydrodynamic theory and semi-fluid friction, B., 2.

Vogels, H. See Pringsheim, P. Voges, H., fine structure of emission of a copper single-crystal anticathode, A., I,

Vogl, A. L. See Low, A. H.

Vogl, H., recent acetylene chemistry, A., II, 395.

Vogl, K., sources of light for photochemical processes, A., I, 479. Preparation of boiler feed water, B., 95.

Vogl, W., technical possibilities of fuel economy, B., 751.

Vogt, Eckhart, dia- and para-magnetism in metallic mixed crystal series. IV. Calculation for measurement of the paramagnetism of a dissolved transition metal, A., I, 352.

Vogt, Egon. See Hunsdiecker, C.

Vogt, Ernst, colour of red wines, B., 607. Vogt, F., and Rutle, J., special-cement tests, B., 785.

Vogt, G., progress in casein wool [manu-

facture], B., 1185.

Togt, H., "plastic iron" as jointing material, B., 943. Magnetic [silicon-iron] powder, (P.), B., 249. Thermic treatment of small particles; [spherical bodies], (P.), B., 631. Manufacture of magnetic powder, (P.), B., 1226.

Vogt, M., potassium changes in stimulated superior cervical ganglion, A., III, 133. See also Dale, H. H.

Vogt, O. See Krüger, W. Vogt, R. R. See McCusker, P. A., and Vaughn, T. H.

Voichescu, P. See Spacu, G.

Voigt, A., new raw material-naphthenic acids, B., 757.

Voigt, C. Q. See Hahner, C.

Voigt & Haefiner Akt.-Ges., and Trambauer, R., electrically heated boiling vessels, (P.), B., 363.

Voinilovitsch, G. I., and Achrap, L. K., extraction of hydrocyanic acid from the air of fumigated rooms, B., 397.

Voinov, A. Šee Sokolik, A.

Voit, K., and Friedrich, H., occurrence of formic acid in urine following an apple diet, A., III, 20.

Voith, Hanns. See under Voith, J.M.Voith, Hermann. See under Voith, J. M.

Voith, J. M., consistency regulation of pulp for manufacture of paper, etc., (P.), B., 229.

Voith, W. See under Voith, J. M.

Voitila, T., ketol condensation, A., II, 51. Detection and determination of aldehydes by halogen derivatives of dimedon, A., II, 343.

Voitova, E. V., and Verezemskaja, E. M., laboratory method of determining ignition tomperature of low-temperature coke, B., 104.

Vojtaschik, A. A. See Usatenko, J. I.Vokes, C. G., filters, (P.), B., 1289.

Volarovitsch, M. P., viscosity and plasticity of disperse systems. I., A., I,

Derjaguin, B., and Leonteva. A. A., shearing modulus of vitreous systems in interval of softening, B., 509.

and Fridman, R. S., viscosity of the system K₂B₄O₇-B₂O₃ in the fused state, A., I, 356.

and Tolstoi, D. M., influence of a magnetic field on viscosity of liquids, A., I, 232.

See also Derjaguin, B.

Volck, W. H., and California Spray-Chem. Corp., mineral oils of high saturation. (P.), B., 1012. Insecticidal spray compositions, (P.), B., 1255.

Vold, R. D., colorimetric test of the solubility equation for regular solutions, A.,

Volfertz, V. J. See Smorodincev, J. A. Volger, K., forest soil sickness due to

humus formation, B., 702.

Volinetz, M. I., volumetric determination of silica in Dinas, quartzite, clays, and fireclays by means of hydroxyquinoline, B., 440.

and Bernstein, S. S., rapid determination of silica, by means of hydroxyquinoline, in quartzite, emery, or clay, Å., I, 198.

Volk, F., production of hydrogen by American M.M.C. process, Viag design, B., 236.

Volk, G. W. See Harper, H. J.

Volkenstein, M. V., Raman effect in solutions in [liquid] ammonia. I., A., I, 112. Carbon suboxide, A., I, 257. Volkind, V. M. See Malov, N. A.

Volkmann, E. W., influence of tar-insoluble and solvent-insoluble constituents on physical properties of coal tars, B., 107.

See also Rhodes, E. O. Volkonsky, M., protection of crops against

acridians, B., 959.

Volkov, A. See Vedenejeva, N. Volkov, K., and Strashesko, D., adsorption of strong electrolytes by coppered char-

coal, A., I, 299.
Volkov, N. R. See Adamovitsch, L. P.
Volkov, S. T., determination of selenium and tellurium in sulphide ores, B., 665.

Volkova, A. I. See Tananaev, N. A. Volkova, L., and Schmulevitsch, E., rapid determination of nickel in steel, with preliminary separation of copper, B., 447. Volkova, V. A. See Schemjakin, F. M. Volkova, Z. V., mechanism of flotation; adherence of particles to the boundary between two phases; fixing of particles on the boundary between water and air bubbles, A., I, 179, 359.

Volkovuisskaja, S. Sce Unik, V. Volkringer, H. Sce Lecomte, J.

Volland, R. H., Paffenbarger, G. W., and Sweeney, W. T., zinc phosphate cement, B., 141.

Volland, W., range of groups of natural H-radiation, A., I, 276.

Vollertsen, J. J., and Rich, A. D., technical developments in meat packing, B., 973. Vollmann, H., Becker, H., Corell, M., and Streeck, H. [with Langbein, G.], pyreno and its derivatives, A., II, 450.

Vollmer, A., determination of tin, lead, copper, brass, and zinc as coatings on

iron, B., 1212.

Vollmer, L. W., and Wescott, B. B., ferrous alloys for the oil industry, B., 575. Vollrath, H. B., progress in machinery for

chemical plant [for rayon manufacture], B., 1187.

Volrath, R. E., continuously active cloud chamber, A., I, 50.

Walton, L., and Lindegren, C. C., bactericidal properties of acraldehyde, A., Ill, 277.

Volman, D. H. See Blacet, F. E.

Volmar, Y., and Klein, S., determination of reducing sugars by the alkalimetric method of Rosenthaler and Curli, A., II, 6.

Volmer, M., and Schmidt, O., fusion, A., I, 353.

and Seydel, G., rate of dehydration of manganous oxalate dihydrate, A., I, 468.

See also Boas-Traube, S.

Volodina, O. E. See Dimov, A. M.

Volodutzkaja, Z., and Chovanskaja, A., determining furfuraldchyde in commercial products, B., 20. Volokitin, \hat{D} . See Bag, Λ .

Volotschanenko, L. E., rapid determination of nitrogen [in beet pulp] by the Kjeldahl

method, B., 1108.

Volovik, B. E., microscopical and thermal analysis of alloys, B., 354. and Jasirkina, N. I., electrolytic etching

of alloys, B., 689. Volski, A. N., and Agratscheva, P. A. chemical equilibria in melts (matte and slag), B., 43.

Volstein, L. M. Sec Grünberg, A. A. Voltmann, H. J. N., and Rockwell Co., W. S., colouring and hardening steel, (P.), B., 580.

Volwiler, E. H., Vliet, E. B., and Abbott Labs., mercury compounds of benzotrifluoride, (P.), B., 1136.

Volz, H., magnitude of nuclear forces, A., I, 214, 341.

Vondraček, R., binary systems of phenol with some hydrocarbons, A., I, 357.

and Dostal, J., solubility of hydrocarbons in mixtures of phenol and water, A., I, 128. Separation of hydrocarbon mixtures by means of phenol, B., 315.

Vondrák, J., physico-chemical conditions in extraction of sugar juices, B., 960. Siloing exhausted beet slices, B., 1105. Oftner method of determining small

amounts of invert sugar, B., 1114. and Kminek, M., influence of rainfall on composition of beet juice, B., I105. Vondrášek, O. See Skramovský, S.

Vonnegut, B., and Warren, B. E., structure of crystalline bromine, A., I, 117.

Vonsovski, S. See Schubin, S. Vontobel, H. See Treadwell, W. D. Voorhees, V. See Rogers, T. H., and

Standard Oil Co. Voorhis, S. N. van, apparatus for measure-

ment of artificial radioactivity, A., I, 583.

Voorst, F. T. van, semi-mioro-butyric acid value. III. Semi-micro-butyric acid value and new Kirschner value of Dutch butter fat, B., 150. Determination of sucrose in chocolate pastes, B., 183.

Voos, E., section CaO,SiO2-MnO,SiO2 in the ternary system SiO2-CaO-MnO, A.,

Vorbrodt, IV., use of concentrated hydrogen peroxide in determining mineral compounds in vegetable and animal substances, A., III, 108.
Vorce, J. E. See Adams, O. P.
Vorhaus, M. G., Williams, Robert R., and

Waterman, R. E., crystalline vitamin- B_1 , A., III, 404.

Voris, Le R., effect of vitamin-B, deficiency on heat production of the rat, A., III, 494.

See also Kriss, M. Vorkauf, H., and Herpen & Vorkauf, Ingenieure, rotary heat exchanger, (P.), B., 630.

Vorländer, D., polymorphism of crystalline liquids, A., I, 403.

[with David, Hellmuth], mobility of iodoxy-group in p-iodoxynitrobenz-

cne, A., II, 92. [with Wilke, R., Haberland, U., and Ost, K.], crystalline liquid combinations of p-azocinnamic esters with p-azophenol derivatives; processes of

association, A., II, 493. and Specht, P., mechanical double refraction of oils in relation to molecular structure and association, A., I,

Vorobiev, A. L., simple micro-burette, A., I, 267.

See also Zanber, $E.\ L.$

Vorobiev, M. N., electrical heating of the Dreschmidt platinum capillary in the analysis of gaseous fuels, B., 1002.

Vorobiev, N. K. See Goltzschmidt, V. A. Vorobieva, A. D., micro-volumetrio determination of silicic acid in soluble silicates, A., I, 198. Microchemical determination of silicic acid in presence of other substances, A., I, 198. Reaction of sparingly soluble salts with phosphoric, arsenic, and arsenious acids, and application of these salts to separation of arsenic from phosphoric acid in qualitative analysis, A., I, 325.

Vorobieva, O. I. See Krauze, E. F., and Novoselova, A. V.
Vorobjov, A. See Venderovitsch, A.
Voronov, N. M., system platinum-silicon, A., I, 127.

See also Nemilov, V.A.

Voronova, A.I. See Jolson, L.M. Vorontsebichin, V.E., determination of chlorine ion in solutions encountered in the soda industry, B., 339. Composition of precipitates forming in apparatus used in soda production, and methods for their elimination, B., 339. Purification of brine for ammonia soda process, B., 901. Determination of carbonate in soda-factory solutions, using Scheibler's apparatus, B., 1042.

Vorontzov, I., and Sokolova, P., sulphonation of β -naphthol under drastic conditions, B., 1018.

Voroshcov, N. N., and Kozlov, V. V., photo-sensitive nitro-compounds. III. mesoNitroanthracenemonosulphonic acids. IV. Action of light on nitrosulphonic acids in water, or on wool

or paper, A., II, 333. and Titov, A. I., acylation of aromatic

aminosulphonic acids. II. Reiterated acylation method, A., II, 13. Acylation of aromatic aminosulphonic acids, A., II, 57.

and Tscherkasski, A., hydrogen sulphite compounds of azo-dyes. V. Hydrogen sulphite reaction of azo-dyes containing two auxochromes, A., II, 13.

Vorotuintzev, S. I. See Lurie, J. S. Vorschütz, J., therapeutic remedies, (P.), B., 1273.

Vorster, J. See Meerwein, H.

Vorstman, N. J. M., detection of akon (akund) fibre in kapok, B., 123.

Vorwerk, W., adhesive sheet material, (P.), B., 819.

Vosburgh, W. C., Guagenty, M., and Clayton, W.J., saturated standard cells with small temperature coefficients. II., A., I, 465.

Israel, K., and Birch, O. G., system nickel oxalate, potassium oxalate, and

water at 30°, A., I, 30.

Newlin, I. G., Puetti, L. A., Peck, R. L., and Diek, R., system cadmium oxalate, potassium oxalate, and water

at 20-30°, A., I, 30. and Saylor, J. H., air-driven centrifuge for semi-micro-qualitative analysis,

A., I, 332.

Sec also Bates, R. G., and Clayton, W. J. Voschtschinskaja, M. S. See Tananaev, N. A.

Vose, R. S., and Sun Oil Co., lubricating oil, (P.), B., 1165.

Voskresenskaja, N.K., and Janatjeva, O.K., heterogeneous equilibria in the ternary system lithium chloride-magnesium chloride-water, A., I, 363.

See also Kurnakov, N. S. Voskresenski, S. K. See Milovanova, S. K. Voss, H. See under Lehmann & Voss &

Voss, H. E., and Rabald, E., production in vitro of costrogenic substances, A., III,

Voss, J., Schnecko, O., and Visking Corp., extrusion apparatus [for cellulose tubing], (P.), B., 657.

Voss, W., and Butter, G., glycyrrhizin. III. Isomerism of glycyrrhetic acid, A., II, 346.

Klein, P., and Sauer, H., glycyrrhizin. I., A., II, 87.

and Pfirschke, J., glycyrrhizin. II. Novel disaccharide as sugar component of glycyrrhizin, A., II, 87. Semi-micro-determination of hexuronic acids, A., II, 228.

and Wulkan, H., esters of sulphurous acid. IV. Action of sulphurous esters on amino-acids, A., II, 138.

Vosskühler, H., structure of magnesiumrich magnesium-calcium alloys, A., I, 608. Electrical conductivity of hydronalium, B., 576. Lithium-aluminium alloys, B., 1357.

Votoček, E., glucidic constituents of interior tissue of stem of papyrus

(Cyperus papyrus), A., III, 244.

Votoček, E., and Muller, R., new reagents for recognising ketoses, A., II, 178.

Valentin, F., and Buliř, J., constituents of the oil of Verbascum seeds, B., 152. and Wichterle, O., additive products of hydrocyanic acid with glucosylarylamines and glucosylpiperidines, A., Il, 235.

Vouk, V., iron storage by blue algæ, A., III, 243.

Vovk, M. V. See Izbekov, V. A.

Voyatzakis, E., compounds of nitroprussides and hexamethylenetetramine, A., II, 89. Vozdvishenski, G. S., deposition of bright nickel coatings on unpolished surfaces, B., 146. Formation of striated

nickel coatings, B., 146. and Bramina, L. A., penetration of electrolytic cadmium deposits into

iron, A., I, 568.

Voznesenskaja, E. Sec Rakovski, E. V. Voznesenskaja, O. See Berlin, L. E.

Vozschinskaja, Z. I., light fractions from tar of Kaschpira shale, B., 10.

Vrabek, J. S., closed-circuit grinding as an engineering problem, B., 400.

Vracun, D., automatic preliming [of beetsugar juices], B., 960.

Vschivtzev, S. N. See Chistov, I. F. Vschivtzeva, M. M. See Chistov, I. F.

Vuigovski, G. V., preparation of furfuraldehydefromsunflower-seedhulls, B., 1168. and Ginzburg, M. L., determination of moisture in whole and ground sun-

flower seeds, press cake, and hulls in Trinkler's apparatus, B., 806.

Lapina, T., and Ginzburg, M. L., sunflower oil, B., 366.

Vuillemin, R., mixtures of aluminous and slag cements as quick-setting cements,

B., 554.

Vuishenski, V. A., anethole, B., 497. Vukadinović, M., [determination of] ash content of coal, B., 7.

Vukolev, P., determination of aluminium salts by adsorptional titration, A., I, 47. Analysis of cations of the first analytical group, with the use of formaldehyde, A., I, 579.

 ∇ uks, M., scattered spectra of polymorphous and isomorphous crystals, A., I, 219. Scattered radiation of mixed crystals,

A., I, 497.

See also Gross, E., and Tscherniaev, V. Vul, B. M., and Goldman, I. M., breakdown and flash-over of solid dielectrics in compressed nitrogen, B., 460.

Goldman, I. M., and Raschtschektaev, I. N., primary potentials in a gas under pressure, A., I, 2.

Vulcan Copper & Supply Co. See Wentworth, T. O.

Vulcan Detinning Co. See Buttfield, W.J. Vulcan Proofing Co. See Lewis, R.R. Vultson, V.S. See Svetlov, J.M. Vultson, V.I., iron alloys for chemical

machinery, B., 44. Calculation of the sodium number [for boiler water], B., 95. Vullierme, M., purification of liquids used in aircraft provided with propellers, (P.),

B., 401.

w.

W.-B. Chemical Co. See Wilson, E. D. Waarden, M. van der, calculation of protein content of cows' milk from nitrogen content as determined by the Kjeldahl [method], B., 80.

Wacek, A. von, and David, E., model experiments related to fission of lignin. II. Action of sodium hydroxide and sodium ethoxide on substituted chalkones and dehydrodiisoeugenol methyl ether, A., II, 155.

and Morghen, I., model experiments related to fission of lignin. I. Fission of propenylpyrocatechol ethers by sodium alkoxide, A., II, 155.

and Schöpfer, I., fission of benzenesulphonic esters of pyrogallol, A., II, 97.

and Wagner, Hans, constituents of a water-soluble fraction of a beech-wood

tar, B., 1155. Waché, X. Sco Chevenard, P. Wachter, F. C. Sce Keefer, C. E. Wachter, H. See Sarre, H. Wacker, A. See Biesalski, E.

Wacker Gesellschaft für Electroehemische Industrie G.m.b.H., A., recovery of magnesium from magnesium oxides, (P.), B. 252. Treatment of fibrous materials with liquids, (P.), B., 336. Cleansing [degreasing] of rigid materials, (P.), B., 367. Decarburisation of iron and alloys thereof, (P.), B., 931. Perchloroethylene, (P.), B., 1019. Boron carbides, (P.), B., 1227. Drying process, (P.), B., 1287.

Wackernagel, K. See Gleu, K.

Wad, Y. D., and Anrangabadkar, R. K., nitrogen balance in black cotton soils in the Mulwa plateau. II. Changes during hot weather, B., 269.

Wada, I., and Ishii, R., detection and separation of rhenium, A., I, 150.

Kitajima, S., and Takagi, J., volumetric determination of arsenic acid as ammonium arsenomolybdate, A., I, 198.

Wada, M. See Kuroda, C. Waddell, C. W., cane-juice tempering [with milk-of-lime], B., 379. Use of electrical resistance apparatus in refined sugar-boiling, B., 717. Crystal structure and raw sugar boiling, B., 717. Sugar-boiling systems, B., 1112. Waddell, J. See Du Pont de Nemours &

Co., E. I.

Waddington, A. G. See Brook, G. B. Waddington, C. H. See Heatley, N. G. Wade, G. S., iron oxide pigments, B.,

Wade, H. H., apparatus for concentrating ores, (P.), B., 1071.

Wade, L. J. See Meyer, H. S. Wadleigh, C. H., Brown, H. D., and Young, R., yield of kraut cabbage in Ohio, B., 72.

Robbins, W. R., and Beckenbach, J. R., relation between chemical nature of substrate and degree of chlorosis in maize, B., 479.

Wadsted, B., and Larsson, M., phosphates, (P.), B., 667.

Wadsworth, A., Crowe, M. O'L., and Smith, L. A., spectroscopic investigation of bacterial toxins: absorption spectra of products of C. diphtheriæ, Ā., III, 147.

Hyman, J. W., and Nichols, R. R., lipin content of livers of non-immunised and immunised horses, A., III, 3.

Maltaner, E., and Maltaner, F., antigenic action of phosphatides: purified kephalin, A., III, 5. Antigenic action of cholesterol, A., III, 5. and Pangborn, M. C., reaction of formaldehyde with amino-acids, A., II, 8.

Waelsch, H., exchange of sodium, potassium, and calcium between erythrocytes and plasma; content of these elements in blood-plasma and -serum, A., III, 114.

and Busztin, A., enzymic production of benzamide and hippuric acid, A., III, 481.

See also Zeynek, R.

Waentig, P., Pomilio pulp process of to-day, B., 1321.

Waeser, B., reactions at high pressure and the apparatus used, A., I, 417. Oxygen industry, B., 436. Auxiliary apparatus and small-scale plant from Achema VIII, B., 1141.

Wagenaar, M., destruction of mustard gas with ozone, B., 1412. Wagener, S. See Heinze, W.

Wagenhals, E. R. See Radio Corp. of America.

Wagenhofer, E. See Dubský, J. V.

Wager, V. A., black-rot disease of cabbage, B., 712.

Waggaman, W. H. See Kerschbaum, F. P. Wagner, Albert, cuprammonium silk, (P.), B., 28.

Wagner, Alois, influence of parchment paper membranes on the transport of electrolyte in 0.1n-hydrogen bromide, A., I, 566.

Wagner, B. See Morgulis, S.

Wagner, C., mechanism of formation of ionic compounds of higher order (double salts, spinels, and silicates), A., I, 88.

See also Gundermann, J., Koch, E., and Nerz, K.

Wagner, C. L., and Babcock & Wilcox Co., recovery of heat and chemicals from

waste products, (P.), B., 1140. Wagner, C. R., polymerisation of gases to produce gasoline, B., 314.

and Pure Oil Co., polymerisation of unsaturated hydrocarbons, (P.), B., 117. See also Ridgway, C. M.

Wagner, E. See Köster, W. Wagner, E. (Brno). See Dubský, J. V.

Wagner, E. C., condensations of aromatic amines with formaldehyde in media containing acid. VI. Use of formic acid in the preparation of 3:6-disubstituted dihydroquinazolines from psubstituted amines, and from their bis(arylamino)methanes and Schiff's bases, A., II, 520.

and Eisner, A., condensations of aromatic amines with formaldehyde in media containing acid. V. Substituted dihydroquinazolines from p-chloroaniline and p-bromoaniline, A., II, 308.

See also Young, W. S.
Wagner, E. M. See Coberly, C. J.
Wagner, F. See under Roesch, A., jun.

Wagner, Felix, ammonium salts and aminoacids as nitrogen sources in the production

of pressed yeast, A., III, 271.

Wagner, F. C. See Du Pont de Nemours

& Co., E. I.

Wagner, F. H., and Bartlett Hayward Co., dust collector, (P.), B., 1149.

Wagner, G. Sec Klemenc, A. Wagner, G. B. See Dean, G. A.

Wagner, H. See under Müller & Wagner Modell & Maschinenbau.

Wagner, Hans, pigment structure, B., 260. Chemical investigation of paint materials, B., 810.

and Fischer, Georg, oil-free and water-inoil [paint] emulsions, B., 260.

Wagner, Hans, and Pabst, E., light-transmission of rust-preventive pigments, B., 1086.

See also Wacek, A. von.

Wagner, Hubert, clay puzzuolana, (P.), B., 783. Chemical investigation of building materials, B., 786. Wagner, H. P. See Betterton, J. O.

Wagner, J. See Förster, G.

Wagner, Karl. See Stadler, P. Wagner, Kurt, barium content of Brazilnuts, A., III, 50.

Wagner, K. M. See Kangro, W.

Wagner, R. See Laubenheimer, A., and

Possanner, B. von.

Wagner, W., lousiness of natural silk, B., 533. Staple fibre and some nitrogenous fibres, B., 1032. Production of adhesive copper-plating, especially on glass and porcelain, B., 1340.

Wagner-Jauregg, T., fatty acids of tubercle

bacillus, A., III, 318.

and Arnold, H., syntheses with aliphatic monoterpenes, A., II, 295. Preparation of ay-dichaulmoogroylglycerolβ-phosphorie acid, A., II, 365.

and Griesshaber, H., action of phosphoric oxide on ether, A., II, 83. Pyrophosphoric ester and crystallised salts of l-phospholactio acid, A., II, 90. Acridine salts of hydrogen phosphoric esters, A., II, 350.

Wagstaff, A. I. See Cox, E. G.

Wahl, H., organic catalysts, A., I, 418. Wahlforss, E., Goldblatt, L. A., and

Glidden Co., aromatic ketone and acid [from retene], (P.), B., 1178. Wahlin, H. B., and Whitney, L. V., positive

and negative thermionic emission from tungsten, A., I, 3.

Wahls, H., spun glass and kieselguhr [for insulation], B., 95.

Waibel, F., building up the active layer of a cuprous oxide rectifier, A., I, 114. See also Nitsche, E.

Waibel, J. See Diemar, W. Waibel, W. See Koste, H. Waidt, E. See Piretzschner, H.

Waigand, F., effect of fat content on

mechanical properties of leather, B., Wailes Dove Bitumastic, Ltd. See Shaw, R.

Waine, A. C. See Triplex Safety Glass Co. Wainwright, C. See Gayler, M. L. V. Wainwright, J. A. See Brit. Celanese.

Wait, B. H., and Haller, R. T., preparation of paving composition, (P.), B., 916.

Wait, D., mechanism of paint manufacture, B., 369.

Wait, G. R., and McNish, A. G., further investigations of atmospheric ionisation associated with rainfall, A., I, 488.

Wait, J. F., treatment of [heavy] hydrocarbons, (P.), B., 323. Ozonation, (P.), B., 1047. Refining of mineral oil, (P.), B., 1161. Treatment [refining] [petroleum] oils, (P.), B., 1161, 1303. Treatment of hydrocarbon oils, (P.), B., 1302. Treatment of gaseous fluid [with

ozone], (P.), B., 1337.

Wait, R., detection of vitamin-A, -C, and -D, A., III, 231. Detection of train oil,

Wajnkranc, R., absorption and fluorescence spectra of indium vapour, A., I, 54, 336. Wais, J. See Lachs, \hat{H} .

Wajzer, J., and Lippmann, R., rôle of phosphate in anaërobic metabolism of muscle, A., III, 214. Sec also Lippmann, R

Wakai, H., change in blood- and serumviscosity of rabbits in hydræmia or under influence of diuretics with special reference to relation between specific viscosity and diuresis, A., III, 264. Change through intravenous infusion of Ringer-Locke or glucose solutions, A., A., III, 264. Changes brought about by diuretics, A., III, 264. Changes in blood or serum viscosity of the rabbit under influence of alcohol, A., III, 264. Wakefield, E. G. See Welch, C. S.

Wakefield & Co., Ltd., C.C. See Evans, E.A.Wakeford, L. T. See Hardcastle, F. B. Wakeman, A.J. See Hubbell, R. B., Mendel,

L. B., Pucher, G. W., and Vickery, H. B.Wakerlin, G. E., Bruner, H. D., and Kinsman, J. M., modified pigeon method for bioassay of anti-pernicious anæmia liver extracts, A., III, 11. See also Bruner, H. D.

Wako, J., significance of diastase content of urine in surgical conditions, A., III, 121. Waksman, S. A., associative and antagon-

istic effects of [soil] micro-organisms. I. Historical review, B., 478. Chemical composition of a heather-peat profile, B., §19.

and Foster, J. W., associative and antagonistic effects of [soil] microorganisms. II. Antagonistic effects of micro-organisms grown on artificial substrates, B., 478.

and Hutchings, I. J., lactic acid production by species of Rhizopus, A., III, 223. Associative and antagonistic effects of [soil] micro-organisms. III. Associative and antagonistic relationships in the decomposition of plant residues, B., 478.

Walawalkar, D. G., solid sugars from Mohuwa flower syrup, A., III, 190.

Walcher, R., investigation of fuels, B., 744. Wald, G., bleaching of visual purple in solution, A., III, 199. Visual purple system in fresh-water fishes, A., III, 340. Photo-labile pigments of the chicken retina, A., III, 457.

and Clark, A., visual adaptation and chemistry of the rods, A., III, 457.

and Zussman, H., earotenoids of the chicken retina, A., III, 340.

Waldby, R. M. See Gallup, W. D.Walde, H., electrolytic surface treatment of heavy and light metals, B., 1219.

Walden, G. H., jun. See Averell, P. R., and Beans, H. T.

Walden, L., laboratory cements and waxes, A., I, 50. Instrument suspensions, A., I, 536.

Walden, P., electrolyte and solvents, A., I, 411. Chemical changes during the last fifty years, B., 195.

Waldenmeyer, J. G., therapeutic preparations containing carbonic acid, (P.), B.,

Waldenström, J. See Pedersen, K. O. Waldmann, E., and Chwala, A., sulphuric acid derivatives of iminazolines, (P.), B., 329.

See also I. G. Farbenind.

Waldmann, G., physical processing of earth colours, B., 156.

Waldmann, H., aminoanthraquinone dyes derived from tetrachloroquinizarin, A., 107. 5:6:7:8-Tetrachloroquinizarin and 5:6:7:8-tetrachloro-1:2-benzanthraquinone, A., II, 107. Isatinearboxylic acids, A., II, 115. Derivatives of methylcarbostyril, A., II, 116. Waldmann, H., and Kretsch, R., ψ -form of methyl 2:3-benzanthraquinone-1-carboxylate, A., II, 107.

and Marmorstein, E., Bz-monoalkyl-anthracenes, A., II, 93. and Pitschak, G. [with Hindenburg,

K. G.], synthesis of picene, A., II, 94. and Poppe, H., synthesis of anaquinones, A., II, 106.

See also Todd, A. R. Waldmeier, M., monochromatic solar observations in the light of the helium line 5876, A., I, 590.

Waldron, L. R., effect of leaf rust accompanied by heat on yield, kernel weight, bushel weight, and protein content of

hard red spring wheat, B., 71.
Waldron, W. R. See Du Pont de Nemours

& Co., E. L.

Waldschmidt-Leitz, E., and Gärtner, M., [failure of] enzymes to hydrolyse diketopiperazine carboxylic acids, A., III, 68. Waldstätten, E., [with Feuer, H.], evalu-

ation of Althea root and leaves, B., 618. Walen, R.J., and Nahmias, M.E., negative proton and some artificial radio-

activities, A., I, 58. See also Nahmias, M. E.

Wales, J. A., and McColl-Frontenac Oil Co., cracking of hydrocarbon oils, (P.), B.,

Wali, M. A., and Katti, M. C. T., constituents of Hydrocotyle asiatica. I., A., III, 244.

See also Desai, R. D., and Hunter, R. F.Walke, H., induced radioactivity of calcium, A., I, 213. New radioactive isotope of potassium, A., I, 593. Radioactive isotopes of scandium from calcium and potassium by a-particle bombardment, A., I, 594.

See also Hurst, D. G.

Walker, A.C., moisture in textiles, B., 1033. Walker, A. M., and Hudson, C. L., reabsorption of glucose from renal tubule in amphibia and action of phloridzin on it, A., III, 386. Rôle of tubule in excretion of inorganic phosphates by the amphibian kidney, A., III, 386. Rôle of tubule in excretion of urea by the amphibian kidney: ultramicrodetermination of urea-nitrogen, A., III, 386.

Hudson, C. L., Findley, T., jun., and Richards, A. N., total molecular concentration and chloride concentration of fluid from different segments of the renal tubule of amphibia: site of chloride reabsorption, A., III, 386. See also Elsom, K. A.

Walker, A. O., and Hargraves, W. B., filter, (P.), B., 304.

Walker, A. R. P. See Menzies, R. C. Walker, A. W. See Wedum, A. G.

Walker, B. S., and Boyd, W. C., percentage of iron in hamoglobin, A., III, 247.

Walker, C. L., activated carbon in sewage-

sludgo digestion, B., 847.
Walker, C. R., and Abrasine Products, treatment of crystalline abrasives, (P.), B., 242.

Walker, E. See Todrick, A.

Walker, E. E. See Imperial Chem. Industries.

Walker, F., drying or conditioning apparatus [for tea], (P.), B., 391.

Campbell, W. B., and Maass, O., hysteresis of water vapour on cellulose; influence of air, A., I, 562.

See also Marshall, M. J.

Walker, F. T. See Imperial Chem. Industries.

Walker, G. G., and Republic Steel Corp., welded metal pipe, (P.), B., 54.

Walker, H.A., and Strand, H.P., [electrical] test-tube heater, (P.), B., 149.

Walker, H. W. See Downing, F. B., Du Pont de Nemours & Co., E. I., and Starkweather, H. W.

Walker, James. See Lin, K. H., and

Robinson, R.

Walker, John, silicon carbide refractories and their application in boiler furnaces,

Walker, J. C., and Empire Oil & Refining Co., hydrocarbon-oxygen compounds, (P.), B., 525.
Walker, J. F. See Du Pont de Nemours &

Co., E. I., and Scott, N. D.

Walker, J. M., development of maize smut, Ustilago zeæ (Beckm.), Unger, B., 71.

Walker, K. E. See Du Pont de Nemours & Co., E. I.

Walker, (Miss) M. K. See Carr, (Miss) E. P.

Walker, O. J., and Spencer, E. Y., occurrence of "mottled enamel" of teeth in Alberta and its relation to fluorine content of water supply, A., III, 391.

and Wild, G. L. E., thermal and photochemical decomposition of acetyl peroxide, A., I, 471.

See also Potterill, R. H.

Walker, P. H. See Smither, F. W. Walker, R. H., and Brown, P. E., analyses of Iowa soils for phosphorus, nitrogen, and carbon: a statistical study, B., 270. See also Neal, O. R., and Thorne, D. W.

Walker, S., and Proudley, C. E., sodium and magnesium sulphate soundness tests [for concrete aggregates], B., 675.

Walker, T. K., and Parker, A., preservative principles of hops. XVIII. Theoretical basis of the log-phase method for evaluation of bacteriostatic power, and procedure in using phenol as a standard of value, B., 277.

See also Bond, C. R., and Johnson, E. M. Walker, T. L., determination of the mineral composition of mine dust by means of

X-rays, A., I, 538.
Walker, T. R., testing and control of foundry sands, B., 1347. Testing of steel-foundry sands and control of supplies by specifications, B., 1348. See also Dadswell, C. J.

Walker, V., ash and dust elimination [from

boiler flue gases], B., 855.

Walker, W. See Brit. Celanese.

Walker, W. J., grinding Southern pine under semi-commercial conditions, B., 1187.

Walker, William J., generalised theory of gas-producer reactions with suggestions for research and development, B., 8. Fuels for internal-combustion engines. B., 1006.

Walker, W. O., Kopsch, U., and Smith Corp., A. O., acetic acid, (P.), B., 758.

Walker, Ltd., W. & F., and Freestone, J. T., apparatus for diffusing volatilisable media, (P.), B., 635.
Walkiewicz, W., detecting early stages of

meat decomposition, B., 82.

Walkley, A., use of sodium hydroxide as dispersing agent in mechanical analysis of soils, B., 269.
Wall, E. M., "trace elements" in relation

to bush sickness, A., III, 204. See also Grimmett, R. E. R.

Wall, F. T., and Glockler, G., double minimum problem applied to the ammonia molecules, A., I, 348.

See also Glockler, G.

Wall, T. F., abnormally high magnetic permeability of nickel wire obtained by surface treatment, A., I, 402. Magnetic quality of nickel wire as influenced by the surface, A., I, 503.

Wallace, E. L., laboratory apparatus and method for determining resistance of sole leather to abrasion, B., 1094.
Wallace, H. A. Sco Frey, R. W., Haller,

H. L., and Palkin, S.

Wallace, J. See Schaffer, R. J.

Wallace, J. S., water-purifying mechanism, (P.), B., 94.

Wallace, R. W. See Cooper, H. P.

Wallace, T., survey of soils and fruit in the Vale of Evesham, with special report on vegetable crops, B., 1095. Orchard factors affecting quality of fruits, B., 1102.

Wallace & Tiernan Co., Inc., and Peet, G. D., supplying gas for chlorination or similar treatment of liquids, (P.), B., 669.

Wallagh, G., and Wibaut, J. P., mononitration of o-chloroiodobenzene, A., II, 92.

See also Wibaut, J. P.

Wallbach, G., morphological sugar metabolism in the human leucocyte culture, A., III, 247.

Walle, H. van de, stereoisomerides of chlorodibromoethylene, A., II, 132.

Wallenfels, K. See Kuhn, R.

Wallenstein, [sugar-]juice control processes and their applicability in works, B., 173. Waller, I., specific heat of paramagnetic crystals at low temperatures, A., I, 70.

Waller, L. J. See Tomski, H. W. Waller, W. H. See Barris, R. W.

Wallerstein, L., Gale, R. A., Hawley, T. G., jun., and Wallerstein Co., manufacture of textiles [containing undegummed silk], (P.), B., 428. Silk yarn prepared from natural silk in the gum, (P.), B., 428. Yarn, (P.), B., 428. Mixed cellulose acetate-natural silk fabrics, (P.), B., 428. Making a knitted fabric, (P.), B., 428.

Hawley, T., Gale, R. A., and Wallerstein Co., treatment [degumming] of silk

and silk products, (P.), B., 127.

Pfannmuller, J., and Wallerstein Co., depilation and bating of hides and a bate [therefor], (P.), B., 375. [Unhairing in] production of leather, (P.), B., 593. [Unhairing in] leather manufacture, (P.), B., 593.
Wallerstein, Co., Inc. See Wallerstein, L.

Walling, E. See Hahn, O.

Wallis, E. S., and Bowman, P. I., molecular rearrangements involving optically active radicals. VI. Displacement of hydroxyl by chlorine in optically active β-phenyl-β-methyl-n-butyl alcohol, A., II, 190.

and Fernholz, E., a-sitosterol, A., II, 100. Simple preparation of the chloroketone, C₁₉H₂₇OCl, dehydroandrosteryl chloride, A., II, 251.

Fernholz, E., and Gephart, F. T., molecular rearrangement in sterols. I. Action of anhydrous potassium acetate on cholesteryl p-toluenesulphonate in acetic anhydride solution, A., II, 99.

See also Burwell, R. L., jun., Ford, E. G.,and Yarnall, W. A. Wallis, G. C. See Olson, T. M.

Wallis, V. C., and Oertling, Ltd., L., chemical, assay, and similar balances, (P.), B., 198.

Wallmark, S. See Lagerquist, K. Wallner, E. See Margitay-Becht, E.

Walls, F.J. See Sands, J. W.

Walls, H. J., and Ludlam, E. B., variation with temperature of ultra-violet absorption spectra of acetone and iodine in solution, A., I, 393.

See also Fromherz, H.

Wallwood Corporation. See Griffin, H. H., and Herzog, R. O.

Walmesley, C., water purification at Perth: chloroamine treatment, B., 192.

Walmsley, G., and Walmsley, W., cupolas, (P.), B., 356.

Walmsley, W. See Walmsley, G.

Walmsleys (Bury), Ltd., Randell, H. C., and Lord, H., machines for manufacture of paper, etc., (P.), B., 1325.

Walpamur Co., Ltd., fusion and esterification of copals, (P.), B., 158.

Walpole, A. \hat{L} . See Linstead, R. P

Walsall Conduits, Ltd., Whalley, W., and Read, A. E., electric resistance heating elements, (P.), B., 57. Electric-resistance elements or refractory supports therefor, (P.), B., 804.

Walsh, H. N., aggregate grading in relation to concrete mix design, B., 348. Grading

of aggregates for concrete, B., 675. Walsh, J. F., corn [maize] proteins, B., 969.

Walshaw, H. R. B. See Brooke, W. J. Walter, A. See Sartory, A.

Walter, Edmund, behaviour of recent fabrics containing staple fibre towards

washing, B., 1033.
Walter, Erich, influence of calcium salts

on spirits, B., 177. Walter, F. See Tostmann, J.

Walter, (Miss) G. F. See Carr, (Miss) E. P., and Pickett, L. W.

Walter, H. G., report of the 1934-5 Committee on methods of testing selfraising flours, B., 385.

Walter, K., [use of] Plextol in the textile industry, B., 1196.

See also Jamm, W.

Walter, P., application of acetylene in the rubber industry, B., 265.

Walter, R. R., [sintered hard carbide] alloy, (P.), B., 692.

Walter-Levy, (Mme.) L., double de-composition between solutions of magnesium sulphate and potassium carbonate in boiling solutions, A., I, 40. Basic magnesium carbonates, A., I, 194. Basic magnesium chlorocarbonate, A., I, 472.

Walters, (Miss) B. P. M., and Evans, E. J., magneto-optical dispersion of organic liquids in the ultra-violet. IX. Formic acid, methyl formate, and isopropyl formate. X. Magneto-optical dispersion of isoamyl acctate, methyl isovalcrate, and acetone, A., I, 13, 222.

Walters, C. H. See Carbide & Carbon Chemicals Corp.

Walters, F. M., jun., nature of the ironmanganese alloys, A., I, 608.

and Wells, C., alloys of iron and manganese. XIII. Constitution of the binary alloys. XIV. Iron-carbon alloys containing 7% of manganese, B., 44.

See also Ackley, R. A. Walters, L. S., determination of aminoacid nitrogen in brewing materials, with reference to Folin's colorimetric method, B., 278.

Walters, O. H. See Imperial Chem. Industries.

Walterskirchen, L., and Zacherl, S., toxic action of hamolysed erythrocytes, A., III, 266.

Walther, A. F., and Inge, L. D., conductivity of solid insulators in strong electric fields, A., I, 169.

See also Inge, L. D. Walther, H., bitumen and zinc, B., 62. Action of light on bituminous paints, B., 61.

Walther, J. See Gerstner. Walton, A. R., [rolled] metal articles, (P.), B., 459.

Walton, C. L., Ogilvie, L., and Hickman, C. J., effect of nitrogenous fertilisers on potatoes affected with potato "sickness," B., 1105.

Walton, G. M. See Schaaf, A. E. Walton, H. F., and Wolfenden, J. H., electrolytic separation factor of deuterium at very low concentrations, A., I, 625.

Walton, H. R. See Lambert, L. B. Walton, J. H. See Cobb, A. W., and Knapp, $B.\overline{B}$.

Walton, L. See Vollrath, R. E. Walton, S. F. See White, Harold E. Walton, W. H., photo-electrical determination of konimeter dust spots, B., 397.

Waltz, E. O. See Motok, G. T.

Walzel, R., steel as basic material in surface protection, B., 682.

and Mitsche, R., patenting and heat treatment of steel wire, B., 561.

Wambacher, H. See Blau, M.

Wampner, H. L. See Bogin, C.
Wanag, G., and Lode, A., direct transformation of 2:2'-di-indandionyl into dihydroxynaphthacenequinone, A., II, 156. Application of 2-nitroindan-1:3-dione to isolation and identification of

organic bases, A., II, 199. Wanamaker, E., Allgeo, H. D., and Patents Res. Corp., lubricant and method of treating, (P.), B., 1165.

Wandelt, modern [photographic] development papers, B., 844.

Wandelt, \hat{H} ., development of welding and the formulation of welding specifications [for land boilers], B., 1352. Wandrowsky, B. See Alten, F.

Wandser, B., plaster of Paris, B., 555. Wang, A. B.-L. See Linstead, R. P.

Wang, Chen, and Woo, T. T., isoelectric point of fibroin of Chinese silk, A., III, 376.

Wang, Chin. See Kolthoff, I. M.

Wang, C. F., digestibility of kao-liang, A., Ill, 61. Distribution of calcium, phosphorus, and iron in leafy vegetables, A., III, 81.

Wang, C. W. See Liu, S. H. Wang, H. H. See Hohorst, G., and Spooner, R. C.

Wang, J. S., diffusion of gases through metals, A., I, 75. Properties of adsorbed films with repulsive interaction between adsorbed atoms, A., I, 562.

Wang, L. See Tseng, C. L.

Wang, S. See Wessely, F. Wang, S. H., diabetes mellitus; analysis of 347 cases in Chinese patients. I., A., III, 123.

Wang, Teh H., composition of Chinese cellulose raw materials, B., 1187.

Wang, Tiao H., and Kan, C. H., liver oil from Dasyatis akijei: vitamin contents, physical and chemical constants, B., 58.

Wang, T. M. See Liu, Y. P. Wang, T. Y. See Yang, P. S.

Wang, Y. See Dane, E. Wang, Y. T. See Tseou, H. F.

Wanka, L. See Scholl, Roland.

Wannamaker, T. E. See Rhodes, F. H. Wannier, G., polarisation effects and the Dirac electron, A., I, 492. Structure of electronic excitation levels in insulating crystals, A., I, 501. Wannow, H. A., arsenious sulphide sols

in concentrated acids, A., I, 27. Applications of ultrasonics in colloid

investigation, A., I, 614. and Hoffmann, K., volume of coagula in sedimenting and centrifuging, A., I, 359. Electrolytic coagulation of weakly solvated sols and electrolyte VIII. Determination of activity. exact coagulation values by turbidity measurements. II. Measurements in the infra-red with the photo-cell, A., I, 564.

Wannschaff, G. See Strack, E. Wanser, H., bottling of town's gas for use as motor fuel, B., 863.

Waples, R. M. See Garlock Packing Co. Warbritton, V., pyridine-formalin in Zenker-formol fixatives, A., III, 447.

Warburg, O., and Christian, W., oxidation of the Robison ester by triphosphopyridine nucleotide, A., III, 31. Pyridine, the hydrogen-transporting constituent of fermentation enzymes; pyridine nucleotides, A., III, 31. Fission of Robison's ester by triphosphopyridine nucleotide, A., II, 439.

Warburton, H., and Wright, W. A., bricks, (P.), B., 443.
Warcollier, S., sweet cider, B., 986.

Ward, A. F. H., [improved burette], A., I, 635.

Ward, A. G., viscosity of pure liquids, A., I. 125.

and Gray, J. A., end-points of the β -ray spectra of radium- \bar{E} and uranium- X_2 , A., I, 275.

See also Marshall, J. S.

Ward, A. L., Jordan, C. W., Milbonrne, C. G., and United Gas Improvement Co., elemental sulphur from hydrogen sulphide and sulphur dioxide, (P.), B., 1047.

See also Kurtz, S. S., jun., and Skeen, J. R.

Ward, A. M. See Godward, L. W. N. Ward, A. N. See Dunlop Rubber Co., and Internat. Latex Processes.

Ward, A. R., and Myers, C. E., influence of dead bacteria on microscopic counts of pasteurised milk, B., 1260.

Ward, C. B. See Lamson, P. D.

Ward, E. J. See Kodak, Ltd. Ward, E. N. See Adams, A. E.

Ward, F. S., deterioration of copra caused by bacteria and moulds, B., 1253. Ward, G. E. See Lockwood, L. B.

Ward, J., hydraulic limes-and how to distinguish them. B., 442.

Ward, J.C. See Horn, E.C.Ward, Justus, C., Spencer, D. A., and Garlough, F. E., strychnine. VIII. Relationship of borax and other chemicals to toxicity, A., III, 179.

See also Munch, J. C. Ward, J. T., and Gasoline Products Co., treatment of hydrocarbon oil, (P.), B., 1164.

See also Gary, W. W. Ward, N. E. See Nielsen, J. R. Ward, R., and Struthers, J. D., reactions in the solid state. I. Reactions between barium carbonate and ferric oxide in the presence of oxygen, A., I, 623.

Ward, T.J. See Mitchell, C.A.

Ward Baking Co. See Hoffman, C. Ward, Ltd., T. W., and Booth, A. P., bituminous compositions incorporating indiarubber, (P.), B., 319.

Warden, C. P., oils from coal, B., 1153. Wardlaw, W. See Cox, E. G.

Wardle, R. A., physiology of sheep tapeworm, Moniezia expansa, A., III, 368.

Ware, W. M. See Goodwin, W Warembonrg, H. See Polonovski, M.

Warén. See under Waris, H.

Warga, M. E. See Hicks, V. Waring, F. H. See Scott, R. D.

Waring, H., and Goodlass Wall & Lead Industries, apparatus for separating solids from suspension in gases, (P.), B., 308.

See also Goodlass Wall & Lead Industries. Waring, J. R. S., and Chang, W. Y., formation of radio-phosphorus (30P), A., I, 162.

Waring, R. K. See New Jersey Zinc Co. Waris, H., calcium requirement of lower

algæ, A., III, 47. Wark, D., influence of ammonium sulphate on stubble-sown oat crops in Victoria,

Wark, I. W., and Cox, A. B., principles of flotation. IV. Influence of sodium sulphide, alkalis, and copper sulphate on the effect of xanthates at mineral surfaces, V. Conception of adsorption applied to flotation reagents, IX. Adsorption of xanthates by activated carbon and graphite and its relation to theory of flotation, B., 49, 687, 927. Warlimont, F., and Metallges. Akt.-Ges.,

copper-refining furnace, (P.), B., 690.

Warlow-Davies, E.J., and Southwell, R.V., correlation of impact tests [on metals], and the problem of standardisation, B., 573.

Warmoltz, N. See Druyvesteyn, M. J. Warne, H. See Howell, O. R.

Warne, K. C. See Brann, J. von.

Warne, L. G. G., effect of potassium supply on water relations of foliage leaves, A., III, 236. Effect of potash supply on water relations of apple trees, B., 713. and Jackson, A. A., skatole as a root-forming substance, A., III, 330.

Warne & Co., Itd., W., Griffiths, J. P., Pinnell, C. R., Gladstone, F. R., and Cole, L. V., incorporation of elastic filaments or threads in textile fabrics or other articles, (P.), B., 428.

Warnecke, R., critical potentials of secondary emission, A., I, 274. Secondary emission of pure metals, A., I, 274.

Warner, J. C. See Eagle, S., and McKinney, D. S.

Warner, R. C. See Borsook, H.

Warnock, G. N., textile defects and other problems which confront the making-up trade, B., 654.

Warren, B. E., small-anglo X-ray scattering A., I, 552.

See also Vonnegut, B.

Warren, C. R. See Light, A. B.

Warren, D. T. See Margenau, H. Warren, F. L. See Baddar, F. G., Burrows, H., and Cohen, A.

Warren, G. W. See Dow Chem. Co. Warren, H., demonstration of phosphor-

escence, A., I, 101.

Warren, K.L. See Chamberlain, C.W. Warren, L.A. See Tate, F.G.H. Warren, M.F. See Drinker, C.K. Warren, P.S. See Fraser, F.J.

Warren, R. F. See Carbide & Carbon Chemicals Corp.

Warren, R. G. See Crowther, E. M. Warren, T. E., and Gilmore, R. E., hydrogenation tests on Canadian coal, B., 514. Warrentrup, H. See Tammann, G. Warsila, H. See Kilpi, S. Wartenberg, H. von, solubility of gases in

molten metals, A., I, 75. Strength of unfired ceramic bodies, B., 1340.

and Eckhardt, K., m.-p. diagram of refractory oxides. VIII. Systems containing cerium dioxide, A., I, 307.

Reusch, H. J., and Saran, E., m.-p. diagrams of refractory oxides. VII. Systems with CaO and BeO, A., I, 137. Wartenweiler, F. See Adam, H. R.

Warth, F. J., and Krishnan, T. S., sulphur content of Indian grasses, A., III, 287. Feeding of sheep, A., III, 466.

Warweg, E. See Stearns, G. Was, D. A. See Haringhuizen, P. J. Wasastjerna, J. A., atomistic theory of compressibility, A., I, 22, 231. Elastic constants of alkali halides, A., I, 22.

Waschkau, A. See Gangl, J.

Waser, E., and Blöchliger, G., effect of town sewage on tidal waters, B., 985. and Janett, S., determination of residual solvents in caffeine-free coffee, B., 1127.

Washburn, E. R. See Mason, L. S., and

Olsen, A.L.

Washburn, G. See Haynes, E. Washburn, R. G. See Krauss, W. E. Washburn, V. D. See Graham, F. H.

Washington, L., and Marks, W. M., heat transfer and pressure drop in rectangular air passages, B., 735.

Wasicky, R., and Frehden, O., use of drop reactions for investigation of medicaments. I. Aldehyde and amine reactions for identification of essential oils, B., 1407.

Wasilewski, L., Kaczorowski, A., and Weber, A., electrolysis of molten aluminium chloride, with production of aluminium blocks of any desired thick-

ness, B., 578. Zaleski, J. Z., Kotowicz, A., and Krajewski, S., determining density of liquid polycomponent aluminium alloys, B.,

Wasley, W. L. See Noller, C. R.

Wasser, H., influence of sodium bicarbonate in chlorine bleach liquors, B., 335,659. Wasserman, A. See Benford, G. A.

Wassermann, G., deformability of an ironnickel alloy during the y-a transformation, B., 562.

Wassink, E. C. See Vermeulen, D.

Watanabe, A., physiology of metabolism of alga. II. Substitutes for oxygen respiration of fresh and sea-water algo. III. Distribution of flavins in marine algæ, A., III, 366. Watanabe, H. Sec Nakazawa, R.

Watanabe, I. See Saknrada, I.

Watanabe, K., biochemistry of carbo-hydrates. XIX. Theis and Benedict method applied to determination of free phenols in tissues. XXI. Assimilability and disintegration of N-acotylglucosamine. XXII.—XXIV. Animal β -Nacetylglucosaminidase. I. II. Purification. III. Kinetics, A., III, 92.

Watanabe, N. See Ishikawa, F. Watanabe, Saburo, and Nagasawa, K., brittleness of steel at sub-zero temperatures and rapid-cooling brittleness of

annealed steel, B., 680. Watanabe, Sci-ichi. See Sata, N. Watanabe, Shigeto. See Ito, Takeo.

Watanabé, T. See Nitta, I.

Watase, Y., cosmic ray showers, A., I, 341.

Watchorn, E., and McCance, R. A., subacute magnesium deficiency in rats, A., III, 386.

See also McCance, R. A.

Waterfill, R. W. See Carrier, W. H. Waterhouse, C. E. See Brindle, H.

Waterhouse, H. See Burden, W. M.

Waterman, A. T., Fowler's photo-electric waterman, H. I., Power's photo-decenter theory, assuming quantum absorption probability a function of electronic energy, A., I, 487.

Waterman, C. N. See Betterton, J. O.

Waterman, F. A., dioxan technique for triple staining, A., III, 108.

Waterman, H. J. and Borgaeius, T. W. 4

Waterman, H. I., and Borgesius, T. W. A.,

diazotype printing, (P.), B., 91. De Kok, W. J. C., Leendertse, J. J., and Schoenmaker, W. H., preparation of synthetic ethers from a-chloro-ethers, A., II, 225.

Leendertse, J. J., and Nieman, J. B., polymerisation of tetrahydronaphthal-

ene, A., II, 183.

Leendertse, J. J., and Palm, E. C. H., activity of oxygen towards hydrocarbon mixtures with a high mol. wt., B., 1157.

and Vlodrop, C. van, polymerisation of fatty oils, B., 258. Effect of varying conditions in catalytic hydrogenation of fatty oils on nature of the reaction product. IV., B., 807. Obtaining juice from beets at low temperature, B., 1109.

Vlodrop, C. van, and Gaikhorst, G., polymerisation of fatty oils, B., 939. See also Heortjes, P. M.

Waterman, R. E., [wood] preservatives, B., 916.

See also Cline, J. K., and Vorhaus, M. G. Waters, C. E., inks for recording instru-

ments, B., 260. Inks, B., 467.

Waters, E. T. See Fletcher, J. P., and
Griffiths, J. P.

Waters, G. W. See Saxton, B.

Waters, J. I., and Clason, S. B., speedy finishing methods for rush photographs, B., 731.

Waters, L., and Zürn, A., benzidine-peroxidase reaction with butter, B., 181. Waters, R. M., cyclopropane [pharmacol-

ogy], A., III, 26.

See also Orcutt, F. S., and Taylor, I. B. Waters, W. A., decomposition reactions of aromatic diazo-compounds. I. Evidence for non-ionic reaction, A., II, 97. Decomposition of benzenediazonium chloride, A., II, 454.

Watford Engineering Works, Ltd. See Brough, A. F.

Watkins, C. M., and Gough, C. M., use of asphalt mastic for roofing, B., 556.

Watkins, G. B., and Libbey-Owens-Ford Glass Co., laminated glass, (P.), B.,

See also Hopfield, J. J., and Ryan, J. D. Watkins, P. H., and U.S. Rubber Co., rubber films, (P.), B., 161.

Watkins, W. See Roberts, A. E. Wats, R. C. See Sinton, J. A.

Watson, A. F., reducing power and vitamin-C content of transplantable tumours of the rat and guinea-pig, A.,

Watson, C. B., and Pure Oil Co., conversion of gasoline of low antiknock rating into gasoline of high antiknock rating,

(P.), B., 19.

Smith, Clyde L., and Pure Oil Co., conversion of hydrocarbon oils, (P.), B., 413.

Watson, C. C. See Williams, John Warren. Watson, C. J., urobilinogen. II. Urobilinogen in urine and fæces of subjects without evidence of disease of liver or biliary tract. III. Per diem excretion of urobilinogen in common forms of jaundice and disease of liver, A., III, 121.

and Clarke, W. O., occurrence of protoporphyrin in reticulocytes, A., III,

Woodward, J. C., Davidson, W. M., Muir, G. W., and Robinson, C. H., digestibility of Canadian feedingstuffs: soya-bean oil meal, B., 1264. Digestibility studies with ruminants. II. Plane of nutrition and digestibility of a hay-barley ration, B., 1264. Watson, C. W. See Texas Co. Watson, D. I., apparatus for studying the

effect of aggressive solutions on [cement] mortar, B., 555. Vatson, E. H., alteration of gabbro near

Philadelphia, Pennsylvania, A., I, 384.

Watson, E. M. See McArthnr, C. S. Watson, H. B. See Dippy, J. F. J., and Evans, D. P.

Watson, H. H., system for obtaining from mine air dust samples for physical, chemical, and petrological examination,

Watson, J. A. S., Skilbeck, D., and Ellis, J. C. B., relation of energy intako to live-weight increase in fattening sheep, B., 1129.

Watson, J. D., bronzes in machine construction, B., 48. Economic gas producer operation, B., 638. Utilisation of low-grade fuels, B., 1292.

Watson, J. R., effect of fundusectomy on acidity of gastric and duodenal contents,

A., III, 120.

Watson, K. M., Nelson, E. F., and Murphy, G. B., high-temperature expansion of petroleum fractions, B., 749.

Watson, M., influence of diet on resistance to infection. I. Effect of various diets on fertility, growth, and survival of mice. II. Effect on resistance of mice to bacterial infection, A., III, 344.

Watson, M. B. See Henry, K. M., and Kon, S. K.

Watson, P. B., and Amer. Cyanamid Co., urea resin moulding powders, (P.), B., 63. Watson, S. J., and Ferguson, W. S., composition of grass silage, B., 283.

Losses of dry matter and digestible nutrients in low-temperature silage, with or without added molasses or mineral acids, B., 284. N value of meadow hay, B., 837. Nutritive

Ferguson, W. S., and Horton, E. A., time of cutting hay, and losses entailed during haymaking, B., 615.

See also Allen, L. \mathring{A} .

Watson, W. W., intermolecular forces responsible for pressure broadening

of band lines, A., I, 164, and Humphreys, R. F., ultra-violet spectra of BeH and BeH+, A., I, 547.

Watson, W.W., and Margenau, H., pressure broadening in bands of dipole mole-cules, A., I, 111.

See also Herzberg, G., Margenau, H., More, K. R., and Weber, R. L.

Watstein, D. See Wells, L. S. Watt, G. W. See Scott, W.

Watt, R. M., [surface-recessed] soap tablets, (P.), B., 808.

Wattebot, L., and Brizon, A., application of the [Mennesson] pneumatic micrometer to control of [metal] castings, B., 1353. Watts, A. S. See Brown, J. B.

Watts, G. See Simon, Ltd., H.

Watts, R. L., and Lubriplate Corp., lubricant, (P.), B., 645.
Watts, R. N. See Standard-I. G. Co.

Watts, S. S., and Lloyd-Evans, B. J., flame travel in internal-combustion engines, B., 868.

Watts, V. E., and Amer. Bitumuls Co., stable bituminous emulsions, (P.), B.,

Watts, W. W. See Standard Oil Co. Watzek, H. See Krumholz, P.

Waugh, G. P. See Eastman Kodak Co.

Waugh, J. G., determination of carbon dioxide in air; hand-operated apparatus, B., 504.

Wautelet, C. E., air conditioning, (P.), B.,

Way, C. T. See Muntwyler, E. \searrow Way, H. E., electrical resistivity of single crystals of dilute solid solutions in zinc. A., I, 121.

Way, (Miss), K., photo-electric cross-section of the deuteron, A., I, 274.

Way, W. J. R. See Cox, E. G.Wayland, H., ionisation of neon, krypton, and xenon by bombardment with accelerated neutral argon atoms, A., I, 487.

Wayland, R. G., cummingtonite from the Black Hills, S. Dakota, A., I, 51.

Wayne, T. B., breaking and resolving of emulsions of oil and water, (P.), B., 1163. Breaking of emulsions of oil and water, (P.), B., 1163.

Wayside Gardens Co. See Grullemans, J.J.

Wdowicki, M. See Suszko, J. Weakley, C. E., jun., and Leith, T. B., apparatus for crude-fibre determination, B., 724.

Wean, R. J., [bright] annealing, (P.), B.,

Weare, J. H. See Cohn, E. J., and McMeekin, T. L.

Weart, J. G., and Klassen, C. W., fluorides in Illinois water supplies, B., 1139.

Weatherford, R. D. See Williams, D.Weaver, C. E. See Beckwith, T. D.

Weaver, E., Fonts, E. L., and Reder, R., rancid flavour in milk, B., 1399.

See also Keith, K. L., and Kuhlman, A. H. Webb, C. N. See Hurd, C. D.

Webb, D. A., latent impurities in electrodes used for spectrographic research, A., III, 108. Ultimate composition of biological material. II. Spectrographic analyses of marine invertebrates, and the chemical composition of their environment, A., III, 339.

and Fearson, W. R., ultimate composition of biological material. I. Aims, scope, and methods, A., III, 339.

Webb, H.J. See Wilson, J.K.Webb, J. H., photographic latent image considered from standpoint of the quantum mechanics model of crystals, A., I, 254.

Webb, K. R. See Prideaux, E. B. R. Webb, R. E., and Hileman, J. L., relation of oxidation-reduction potential of milk

to oxidised flavour, B., 488.

Webb, R. N., [coal gas manufacture at New Wortley, Leeds], B., 1001.

Webber, C. S., Wilson, E. A., and Fiberloid Corp., composition [for laminated glass], (P.), B., 1342.

Webby, C. N., valves for controlling high pressures, (P.), B., 308.

Weber, A. See Wasilewski, L.

Weber, A. H., Shenstone effect, A., I, 169.

and Bazzoni, C. B., quartz-to-pyrex joint, A., I, 380.

Weber, A. P., simple apparatus for automatic filtration, A., I, 480. Effect of crystalline hormones on the growth of

yeasts, A., III, 395. Weber, C. G., and Hill, J. R., care of filmslides and motion-picture films in libraries, B., 292.

See also Hill, J. R.

Weber, E., macroscopic theory of metallic conduction, A., I, 556.

Weber, Franz, weighting of silk. II., B.,

Weber, Friedl, double refraction and grains of chloroplasts, A., III, 245. Vacuole contraction and anthocyanophores in Pulmonaria petals, A., III, 283

Weber, F. A., chamber of tower filled with filling material, (P.), B., 1289.

Weber, G., acting against fires, (P.), B., 1287.

Weber, H. See Ziegler, K.

Weber, H. C. See Universal Oil Products

Weber, H. H., analysis of technical solvents. VII., B., 1307.

Weber, I. E. Sce Laporte, Ltd., B. Weber, J. See Irwin, M. H.

Weber, K., rôle of redox potentials in inhibitor action, A., I, 524. Theory of desensitisation. IV., B., 292.

and Režek, A., activated oxalic acid, A., II, 134.

and Schönbaum, B., theory of desensitisation. V. Experiments with colloidfree silver bromide layers, B., 1275. See also Kaden, E.

Weber, K. H. R., analysis of the processes of technical magnetisation. II. Significance of interaction between elementary regions in regard to the technical magnetisation curve, especially when macroscopic flaws are present, A., I, 402.

Weber, K. L., calculations in the soap industry, B., 462. The perfect toilet soap, B., 805.

Weber, L. I., and Legoix, L., permeability studies with medicinal plant infusions, A., plant infusions, A., III, 98. Activation of fermentation by medicinal plant infusions, A., III, 98. Adsorption processes with infusions of medicinal plants, B., 86. Surface tension of infusions of medicinal plants, B., 86.

Weber, L. R. See Randall, H. M. Weber, R. L., and Watson, W. W., ultraviolet wave-length standards of N, C, and O, $\lambda\lambda$ 2300—1080, A., I, 271.

Weber, U. von., racemisation experiments with vapours of substances difficult to racemise, A., II, 365.

Weber, W. See Busch, M. Webre, A. L., and Diaz, J., practical value of mechanical circulation in [sugarjuice] vacuum pans, B., 173.

Webster, C. T., humidity control device for ovens, A., I, 99.

Webster, D. C. See Sage, B. H.

Webster, D. E., and Norton, Co., rubberbonded abrasive articles, (P.), B., 1343.

Webster, D. R. See Alley, A., and Day, J.J.

Webster, F. A. See Newman, E. V.

Webster, G. L. See Blicke, F. F. Webster, (Miss) I. M. See Smith, L. I.

J. E., grape studies, 1387.

and Cross, F. B., analyses of grape juices: variety comparisons, B., 614. Use of the refractometer in studying sugar content of grape juices, B., 614.

See also Haut, I. C. Webster, K. C. See Cox, E. G.

Webster, L. T., and Clow, A. D., propagation of rabies virus in tissue culture and successful use of culture virus as an antirabic vaccine, A., III, 72.

Webster, M. E., and Robertson, I. M., permanganates and plant growth, A., III, 106.

Webster, W.K. Sec Lord, E.

on sulphate [wood pulp] recovery system, B., 425. Webster, W. T., heat-balance calculation on sulphate [wood pulp] recovery

Wechtel, F. See Brenner, A.
Weckel, K. G., mastitis; effect on milk
and tests for its detection, A., III,

and Jackson, H. C., source of flavour in milk exposed for prolonged periods to irradiation, B., 179.

See also Beck, H. H.

Wecker, E., refining and synthesis of fats, and fatty acid distillation, B., 1077.

Wedderer, W. See Chrometzka, F. Wedekind, E., [dioxan lignin and pigment of ebony wood], A., II, 69. Lignin from different tree species, B., 768. See also Grasshof, H.

Wedell, G. O., air-conditioning of milk plant, B., 833, 970. Wedell, K. See Labes, R.

Wedgwood, C. T. See Wedgwood & Sons,

Wedgwood & Sons, Ltd., and Wedgwood, C. T., drying plant such as potter's mangles, (P.), B., 139.

Wedum, A. G., bacterial fermentation and interconversion of hexoses in alkaline solution, A., III, 226.

and Walker, A. W., bacterial fermentation and structure of glucosamine, A., III, 144.

Wee, J. C., preparation of oil-soluble resins from polyhydric alcohols and polybasic acids. II., B., 368.

Weech, A. A. See Culbert, R. W. Weeks, D. C., smoke prevention and elimination of dust from stacks of [steam-]generating stations, B., 1143. Weeks, J. F. See Sheets, O.

Weeks, M. E., and Larson, M. E., J. A. Arfwedson and his services to chemistry, A., I, 636.

See also Truog, E. Weeks, W. S., cooling effect of compressed

air when freely expanded, B., 735. Wefelmeier, W., geometrical model of the atomic nucleus, A., I, 492, 595.

Weger, P., physiology of carnitine and acetylcarnitine, A., III, 24. Action of yohimbine on the vegetative nervous system, A., III, 28.

Wegler, R., ohemiluminescence of cyclic hydrazides, A., II, 213.

and Binder, H., diethylamides of indole-3-carboxylic, 3-indolylacetic, thionaphthen-2-carboxylic, and reduced 3-indolylacetic acids, A., II, 517.

and Frank, W., fission of tertiary amines by nitrous acid, II. Synthesis of β -o-carboxyphenylethylamines, A., II, 349.

Wegmann, E., formation of the alkaline rocks of Julianchaab (Greenland), A., I,

Wegmüller, E. See Koestler, G. Wegner, H. See Weidenhagen, R. Weh, J. A., thermal conductivity of in-

sulating materials, B., 802. Wehrli, H. See Meyer, K. H.

Wehrli, S., apparatus for extracting solutions with heavy solvents, A., I, 636.

Wehrmann, F., prevention of corrosion in gas-cooling plants, B., 201. Danger of corrosion of aluminium, B., 576.

Wei, F. See Tseng, C. L.

Wei, T. C. See Lin, Y. P. Weibke, F., affinity. LXXI. Heats of formation in the system Cu-Zn, A., I, 364. Heat of formation of metallic systems calculated from electrochemical data, A., 1, 455.

and Pleger, I., precipitation-hardening in the system copper-indium and its modification by nickel and cadmium, A., I, 233.

See also Biltz, W., Ehrhorn, H. J., and Quadt, U. von.

Weichert, A. See Brass, K.

Weichherz, J., and Gouguell, B., new equation of state, A., I, 22.

Isakova, A., Drushinina, O., and Manuilov, P., adsorption of gaseous silicon tetrafluoride and of aqueous silicofluoric acid, A., I, 457.

and Katz, S. A., rapid determination of small amounts of moisture in salts, B., 341.

and Kraschevskaja, I. V., system FeAsO₄-NaOH-H₂O, A., I, 138.

and Pleteneva, N., emulsions; regions of heterogeneity in the system sodium oleate, phenol, xylene, and water, and in binary systems of these components, A., I, 183.

See also Katz, S. A.

Weichsel, G., diastatic decomposition of native potato starch, A., III, 244. Fermentative determination of sugar in

Warburg's apparatus, A., III, 271.

Weichselbaum, T. E., cystine deficiency in the albino rat, A., III, 468.

Heinbecker, P., and Somogyi, M., effect of diet on glucose tolerance of normal and hypophysectomised dogs, A., III, 437.

See also Heinbecker, P.

Weidenbacker, R. A., edge-type oil filter, (P.), B., 646.

Weidenhagen, R., Herrmann, Roland, and Wegner, H., iminazoles. IV. Derivatives of glyoxaline, A., II, 211.

Weidenmann, M. See Guyer, A.

Weidert, F., spectral absorption of neodymium glasses, A., I, 60.

Weidinger, A., quantitative preparation of l-cystine from keratin (horse-hair), A., III, 252.

Weidner, C. L. See Theis, E. R. Weier, E., structure of the non-starchcontaining beet chloroplast, A., III, 408. Weigand, K. See Schnegg, H.

Weigel, C. A., and Nelson, R. H., heat treatments for control of bulb mite on tuberose, B., 712.

Weiger, J. A., and Mallory & Co., P. R., electrical make-and-break [silver alloy] contact, (P.), B., 693.

Weigert, J., and Fürst, F., storage of stall manure, B., 1385.

Weigle, J., and Saini, H., transformation of heavy ammonium chloride, A., I, 450. Weigmann, F., and Koehn, A., action of human saliva on diphtheria bacilli. I. Inhibition of development and sporekilling action. II. Transition of form of the bacilli by the action of human saliva, A., III, 417.

Weihe, F. A., jun., and McAleer Manufg. Co., glycols, (P.), B., 758. Weijlard, J. See Engels, W. H.

Weil, A., phospholipins of brain, kidneys, and heart of white rats in hyperthyroidism, A., III, 403.

Weil, A. J., and De Jong, L. E. den D., chemo-specific flocculation of sterols by antisterol sera, A., III, 293.

Weil, L., and Kocholaty, W., proteinase of Clostridium histolyticum, A., III, 397.

See also Szinger, E. Weil-Malherbe, H., brain metabolism. II. Production of sucinic acid, A., III, 131. Glycerophosphoric dehydrogenase, A., III, 480.

Weiland, J. H. See Patterson, W. C. Weiland, P., bactericidal action of B. mesentericus filtrates on the diphtheria bacillus, A., III, 487.

Weiler, J. F. See Biggs, B. S.

Weiler, W., benzol recovery by the wash-oil process, B., 1295. Removal of phenols from waste waters of coke ovens, gas works, and low-temperature carbonisation plants, B., 1414. Weill, P. See Tiffeneau, M.

Weimer, J. L., effect of dwarf disease on the lucerne plant, A., III, 444. Weinbeck, R. See Hilpert, R. S.

Weinberg, A., and Eckart, C., rotation and vibration of linear triatomic molecules, A., I, 445.

Weinberg, M., and Guillaumie, M., apparent and real titres of antitoxic sera, A., III, 6. Titre of antitoxic serum, A., III, 250. Weinberger, H. See Murty, N. N. Weinberger, J. H., and Cullinan, F. P.,

nitrogen intake and growth response in peach trees following autumn and spring fertiliser applications, B., 169.

Weindling, R, and Emerson, O. H., isolation of a toxic substance from the culture filtrate of Trichoderma, A., III,

Weiner, J. G. See Dunn, Max S. Weiner, N. See Michael, A. Weingand, R., sausage skins from cellulose

solutions, B., 655.

Weinhouse, S., and Kharasch, M. S., provitamin-D activity and structure; addition of Grignard reagents to 7ketocholesteryl acetate, A., II, 192.

Weinmann, H. See Rappaport, F.

Weinmann, W. See Meissner, K. W. Weinmayr, V. M. See Du Pont de Nemours & Co., E. I.

Weinstein, A., methyl chloride (refrigerator) gas poisoning, A., III, 309. Weinstein, F. M. See Poljakov, M. V. Weinstein, G. L. See Friedman, M. H. F.

Weinstein, S. S., and Manning, R. J., disappearance of injected adrenaline in the animal body, A., III, 360.

Weintraub, A. M., potentiometric and conductometric analysis of the processes of coagulation and sign reversal of iron hydroxide sol by sodium citrate, A., I, 305.

Weintraub, R. L. See Hanks, J. H.Weintroub, S., demountable vacuum joint

with clamp, A., I, 636.
Weir, H. M., and Atlantic Refining Co., fluid-contacting apparatus, (P.), B., 6. Controlling decolorising of hydrocarbon oils, (P.), B., 1163.

and Eaton, G. L., heat of reaction of cracking petroleum, B., 516.

Weis, A. See Bisbey, B. Weis, G. H. See Betterton, J. O.

Weis, J. H., and Boyd, J. E., jun., Carolina stone, B., 345.

and Feldspathic Res. Corp., treatment of syenites, (P.), B., 1206.

Weisberg, L., Stoddard, W. B., jun., and Weisberg & Greenwald, Inc., electrodeposition of metals [nickel and cobalt], (P.), B., 54.

See also Weisberg, Inc., L. Weisberg & Greenwald, Inc. See Weisberg, L.

Weisberg, Inc., L., Weisberg, L., and Stoddard, W. B., jun., electrodeposition of nickel, cobalt, and nickel-cobalt alloys, (P.), B., 1073.

Weise, F., influence of nine cements on

shrinkage, elasticity, and strength of

road concrete, B., 348.

Weise, H., rust: its formation and prevention, B., 1352.

Weise, W., determining hamoglobin in blood, A., III, 450. Weiser, H. B., and Milligan, W. O.,

coagulation of sols by electrolytes. VI. Cupric ferrocyanide sol, A., I, 80. Mechanism of dehydration of calcium sulphate hemihydrate. II. Observations with large crystals, A., I, 527.

See also Milligan, W. O. Weiser, H. H., influence of deuterium oxide on growth and morphology of lactobacilli, A., III, 319.

Weiser, R. S., and Norris, E. R., effect of environmental temperature and of salts on survival period of adrenalectomised rats, A., III, 38.

Weiske, G. See Klimmer, M.

Weisman, A. I., hormone content of saliva, using the bitterling test, A., III,

Mishkind, D. I., Kleiner, I. S., and Coates, C. W., estrogenic hormones in the ovaries of swordfish, A., III, 361. See also Kleiner, I. S.

Weiss, A. J. Sec Lewis, R. R.

Weiss, C., and Czarnetzky, E.J., proteolytic enzymes of monocytic and polymorphonuclear pleural exudates, A., III, 140.

Weiss, E., histology of cotton fibres, B., 533.

Weiss, E. E. See Grünwald, O.

Weiss, H., theoretical considerations on manufacture of petroleum spirit, B., 204.

and Salomon, T., mineral oils in electrotechnics, B., 1007.

Weiss, J., photosynthesis in green plants, A., III, 159. Reaction mechanism of proteolytic enzymes, A., III, 354. and Porret, D., photochemical reduction

of cerie ions by water, A., I, 471. See also Potterill, R. H., and Rabino-

vitsch, E.

Weiss, P. See Lieben, F. Weiss, R., 3':5':3":5"-tetrabromo-4':4"dihydroxy-1:4-diphenylnaphthalene-2:3dicarboxylic anhydride, A., II, 501.

Weiss, R. G. A. See Talbot, H. J.

Weiss, R. P. See Downs, C. R.

Weiss, S. See Wilkins, R. W. Maria

Weiss, W. See Cobb, R. M. Weiss & Downs, Inc. See Downs, C. R. Weissberg, S. G., and Kruger, P. G., deep terms in Ti vi, V vii, Cr viii, and Mn 1x, A., I, 539.

See also Krnger, P. G.

See Hampson, G. C., and Weissberger, A. James, T. H.

Weissenberg, G. Sec Skaupy, F.

Weissenberg, H., butter and cheese from animal milk, (P.), B., 84, Weissenburger, H. Sco Ott, Erwin.

Weissfeiler, J., Morosova, E. N., and Pesina, E. J., immunising power of varieties of tubercle bacilli, A., III, 414. Weissflog, J., and Winthrop Chem. Co., keeping cut flowers fresh, (P.), B., 1108.

Weisskopf, V., exchange forces between elementary particles, A., I, 109. Statistics and nuclear reactions, A., I, 546.

Weisswange, W., test procedure for determining heat protection of walls and

coverings, B., 556.

Weith, A. J., plastics fortify against corrosion, B., 943.

Weitnauer, H., and Wöhlisch, E., non-essential nature of calcium in action of thrombin on fibrinegen, A., III, 5. Weizmann, C., Bergmann, E., and Haskel-

berg, L., mechanism and applicability of the Guerbet reaction, A., II, 317.

and Davies, H., butyl alcohol-acetone fermentation of maize, B., 278.

and Rosenfeld, B., activation of the butanol-acetone fermentation of carbohydrates by Clostridium acetobutylicum (Weizmann), A., III, 224.

See also Simon, E. Weizsäcker, C. F. von, metastable states of atomic nuclei, A., I, 59. Transformations of elements in the interior of stars. I., A., I, 214. Possibility of a dual β -disintegration of potassium, A., I, 489.

Welch, A. De M., utilisation of arsenic analogue of choline chloride in biosynthesis of phospholipins, A., III, 91.

Welch, C. S., Wakefield, E. G., and Adams, M., function of the large intestine of man in absorption and excretion, A., III, 90. Welch, F. C., and Western Lime & Cement

Co., low-consistency hydrated lime, (P.), B., 908.

Welch, F. V. See Barnard, J. E. Welch, R. C. See Rasmussen, R.

Welch, W.A. See Harris, J.P. Weld, C.B. See Taylor, N.B.

Welding Service, Inc. See Frickey, R. E. Weldon, L. H. P. See Bailey, C. R.

Weldon, M.J. See Phillips, A.Welge, H. J., and Beckman, A. O., photo-

decomposition of ammonia, A., I, 91. See also Eberz, W. F. Welker, W. H. See Hektoen, L.

Wellcome Foundation, Ltd., Smith, Sydney, and Timmis, G. M., alkaloid of ergot, (P.), B., 393.

Weller, C. A. See Westinghouse Electric & Manuig. Co.

Weller, G. See Binet, L. Weller, J., German crude oils and their

treatment, B., 314. Wellhousen, H. See Woods, E. Wellm, J. See Mohr, W.

Wellmann, F., dedusting flue gases with the van Tongeren plant, B., 1143.

Wellmann, O. See Marck, J. Wells, A. A. See Standard Oil Development Co.

F., crystal structure of Wells, A. silver diammino-tetranitro-cobaltiate Ag[Co(NH₃)₂(NO₂)₁], A., I, 172. Crystal structures of alkyl-metal complexes, A., 1, 289. See also Mann, F. G.

Wells, C. See Mehl, R. F., and Walters,

F. M., jun.
Wells, C. F. See Du Pont de Nemours & Co., E. I.

Wells, D. A. Sce Balinkin, I. A.

pulp], (P.), B., 29. Pulp hydrator, (P.), B., 1288. Wells, H. D., freeness detector [for paper

Wells, J. E., Babcock, D. E., and France, W. G., nature of electrode reactions. I. Factors affecting electrochemical reduction of N-nitrosomethylaniline, A., I,

Wells, J. F., screening of fine materials, (P.), B., 197.

Wells, J.J. See Moyer, A.J.

Wells, L. J., and Moore, C. R., hormonal stimulation of spermatogenesis in tho testis of the ground squirrel, A., III, 230.

Wells, L. S., Bishop, D. L., and Watstein, D., differences in limes as reflected in certain properties of masonry mortars, B., 348.

and Taylor, K., hydration of magnesia in dolomitic hydrated limes and putties, B., 1333.

See also Flint, E. P.

Wells, N. A., change in rate of respiratory metabolism in a teleost fish induced by acclimatisation to high and low temperature, A., III, 420.

See also Sumner, F. B.
Wells, P. A., Lynch, D. F. J., Herrick,
H. T., and May, O. E., translating mould-fermentation research to pilot-

plant operation, B., 720. Moyer, A.J., Stubbs, J.J., Herrick, H. T., and May, O. E., effect of pressure, air flow, and agitation on gluconic acid production by submerged mould growths, B., 965.

Wells, R. C., and Erickson, E. T., organic constituents of a recent deposit from Chincoteague Bay, Virginia, A., I, 381. and Stevens, R. E., analysis of pollucite, A., I, 375.

Wells, S. A. E. See Stone & Co., Ltd., J. Wells, S. D., and Muggleton, G. D., paper pulp-making process, (P.), B., 128.

Wells, T. B. See Eastman Kodak Co. Wells, W. F., centrifuging apparatus [for estimating bacterial content of gases],

(P.), B., 636.

Wells, W. H. See Williams, John H.

Wellwood, G. W. See Hershberg, E. B.

Welo, L. A., and Baudisch, O., transformations from y-FeOOH and y-Fe2O3 to a-Fe₂O₃ at lower temperatures and the irreversible transition y-FeOOH to a-FeOOH, A., I, 474.

and Petersen, M., magnetic susceptibility of oxides of lead, A., I, 557.

Wels, P., reductions in irradiated skin, A., III, 63.

Welsch, M., and Elford, W. J., determination of size of the bacteriolysins of Actinomyces by ultrafiltration, A., III, 398.

Welter, A., and Gockowski, S., corrosion by drops of falling liquid, B., 1219.

Welter, G., effect of mechanical vibrations on tensile properties of [metal] constructional materials, B., 574. Measurements of elastic limit of mild steel, B.,

and Bukalski, A., effect of vibrations on tensile properties of metals, B., 928.

and Mojmir, T., mechanical properties of single and multiple aluminium crystals, B., 926.

and Oknowski, L., influence of rate of stretching at high temperatures on tensile strength of copper, brass, aluminium, and duralumin. I., B., 682.

Welter, J., bottoms of basic Bessemer converters with dolomite tuyeres, B., 557.

Weltner, M_{\star} See Groh, J_{\star} . The state of J_{\star} Weltzien, W., and Buehkremer, J., swelling and mechanics of artificial silk fibres. I.

B., 533. Welwart, soap foams, B., 365. Detection of hair dyeing by bismuth compounds, B., 661.

Welzel, G., experiences with vacuum pugs, especially in coarse ceramics, B., 1050.

Wemhoener, E. F., filter, (P.), B., 741.

Wen, S. P. See Hohorst, G.
Wen-Po, W., atomic forces of solid state. IV. VI. Non-metals, A., I, 116, 552.

Wenaas, P. E., biuret reaction of the pentapeptide tetraglycylglycine, A., II, 371.

Wende, C. W. J. See Rodebush, W. H. Wendeborn, H., and Amer. Lurgi Corp., grannlation of fine material by adhesion to moistened nuclear fragments, (P.), B., 992.

Wendel, F., preparation of alcohol from currants, B., 831.

Wendel, F. B., Albert, H., and Stauber, A., metal products [seamless pipe elbows and tees], (P.), B., 935.
Wendt, C. F., action of extract of brown

fatty tissue of the hibernating hedgehog, A., III, 476.

Wendt, H. D., and Milk Processes, Inc., creamery products, (P.), B., 185.

Wendt, $W. \hat{A}$., and Hawaiian Pineapple Co., treatment of plants to expedite bud development, (P.), B., 482.

Wenger, G. See Mouriquand, G.

Wenker, H., syntheses from ethanolamine. III. Synthesis of ethyl N- β -chloroethyl-The Symbols of β -chloroethylcarbimide, IV. Synthesis of N- β -chloroethylphthalimide, A., II, 53, 149. Azo-dyes [for indicator papers], (P.), B., 221.

Wense, T., enzyme apparently active at low temperatures, A., III, 393.

See also Bayer, G.

Went, F. W., salt accumulation and polar transport of plant hormones, A., III, 444. Went, S., and Sarkady, L., serological effect and composition of proteins of some filtrates of immune sera, A., III, 454.

Wentrup, H., formation of inclusions in steel, B., 918.

Wentworth, T. O., Baechle, S. N., and Vulcan Copper & Supply Co., separation

of formic and acetic acids, (P.), B., 417. and Vulcan Copper & Supply Co., dehydration of acetic acid and other lower fatty acids, (P.), B., 525.

Wentzel, G., theory of the β -transformation and nuclear forces. I., A., I, 60, 388. Wentzel, H., disinfectants of the phenol series, B., 397.

Wenusch, A., nicotine content of main smoke stream of thick and thin eigarettes, B., 187. Scientific basis of evaluation of the strength of tobacco products, B., 619. Resins in tobacco smoke, B., 619. Varying behaviour of tobacco leaves during drying, B., 619. Composition of the solid-liquid constituents of tobacco smoke, B., 619. Pfyl's smoking method, B., 619, 1266. Amount of solid constituents of tobacco smoke and solubility of their nicotine salts in various solvents, B., 1132. Determination of nicotine in tobacco smoke, B., 1132.

Wenz, F. See Brukner, B.

Wenzel, E. H., fertilising materials, (P.), B.,

Wenzel, F. W., jun., and Reid, E. E., monothioformals, A., II, 318. Preparation and properties of alkyl thioacetates, A., II, 322.

Wenzelides, R., sour fodder and preservation

of green fodder, (P.), B., 1406.
Wenzke, H. H. See Curran, B. C., and
Koehl, S. M.

Wenzl, H., constant supervision of effluents in paper and pulp mills in the prevention of fibre losses, B., 657.

Wenzl, R., practical results with the laminated vapour condenser, B., 829.

Werby, A. B. See Boos, W. F

Werch, S. C., and Altshuler, S. S., bloodsugar-raising substance in urine of diabetic and non-diabetic patients, A., III, 378.

Wergin, W., growth of plant cell-walls, A., III, 51.

See also Gundermann, Josef.

Werkenthin, M. Sec Smolenski, K.

Werkman, C. H., Stone, R. W., and Wood, H. G., dissimilation of phosphoric esters by propionic acid bacteria, A., 111, 433.

Zoellner, E. A., Gilman, H., and Reynolds, H., phosphoglyceric acid in dissimilation of glucose by Citrobacter freundii, A., III, 357.

See also Brown, Russell W., Erb, C., Nelson, M. E., Stone, R. W., and Wood, H.G.

Werkspoor Naamlooze Vennootschap, apparatus for continuously crystallising solu-

tions, (P.), B., 1289. Werle, E., callicrein of blood, A., III, 4. Formation of histamine from histidine by animal tissues, A., III, 18. State of activity of callicrein of the gastric glands and of the external secretion in dogs, A., III, 200.

[with Götze, W., and Keppler, A.], action of callicrein on the isolated intestine; a new substance causing intestinal contraction, A., III, 135.

and Herrmann, H., formation of hist-amine from histidine by animal tissues, A., III, 304.

and Mennieken, G., production by animal tissues of tryptamine from tryptophan and of tyramine from tyrosine, A., III, 421.

Werner, A. See Weygand, C.

Werner, A. E. See Staudinger, H. Werner, C. J. See Werner, C. V.

Werner, C. V., Schreiner, C., and Werner, C. J., brewing [of lager], (P.), B., 1396. Werner, E., surface treatment of aluminium,

B., 1223. Werner, E. A., carbamide as a hygroscopic substance, A., I, 307.

Werner, H. See Pfeiffer, P.

Werner, Hans, fat from the skunk ["surilho"], Conepatus suffocans, Az., B., 364.

and Schmalfuss, H., evaluation of codliver oil emulsions, B., 1235.

See also Schmalfuss, H.

Werner, H. W., Pratt, T. W., and Tatum, A. L., comparison of ultra-short-acting barbiturates, nembutal, and tribromoethanol, A., III, 350.

Werner, K., preparation and working up of cellulose triacetate, B., 331.

Werner, O., accumulation of calcium oxalate in cells of Tradescantia fluminensis rich in starch, A., III, 243.

Werner, S. See Laves, F. Genest Ges.m.b.H., sound-Werner absorbing coverings for walls, floors, and

ceilings, (P.), B., 678.

Wernersson, F., apparatus for drying and heat-treating material, (P.), B., 401. Production of [prepared] fibrous products [for upholstery purposes, etc.], (P.), B.,

Wernick, S., electrodeposited coatings as corrosion-preventives, B., 1068.

Wernicke, E. A., determination of sulphur

in oils, [ctc.], B., 11. Wernimont, G. T. Sec Middleton, A. R. Werntz, J. H. See Du Pont de Nemours & Co., E. I.

Werr, F., xylenol method for detection of nitrate, A., I, 375. Xylenol method for determining nitrate-nitrogen and its use in studying physiology of the sugar-beet, A., I, 475. Micro-determination of nitrate in plant material, especially Beta vulgaris, by the xylenol method, A., III,

Werring, W. W. See Bell Telephone Labs. Wert, L. R. van, effect of high hydrostatic pressures on ageing [of metals and alloys], B., 51.

and Gonser, B. W., certain age-hardenable copper alloys; lattice changes due to heat treatment, B., 569.

Werth, E., forest soil sickness due to humus formation, B., 702.

Werth, H. See Haase, K.

Wertheim, H. See Liebesny, P. Wertheim, J. See Hartung, E. J. Werthessen, N. T., [automatic] apparatus for measurement of metabolic rate of small animals, A., III, 302.

Weschky, L. See Langenbeck, W. Wescott, E. W., treatment of lateritio ores,

(P.), B., 689.
Wescott, W. AB., and Multigraph Co., flexible composite planographic plate, (P.), B., 157.

Wesemann, F., firing of open-hearth furnaces in German steel works, B., 42. and Strähuber, F., losses by burning in rolling-mill furnaces. III. Further factors relating to mill scaling; economic viewpoints, B., 560.

Wesenberg, B. See Andreasen, A. H. M. Wesley, W. A., Copson, H. R., and La Que, F. L., consequences of graphitic corrosion of cast iron, B., 142.

Wesly, W., and Geisler, feeding of super-pressure boilers with chemically conditioned water, B., 627.

Wesolowski, J. See Dobinski, S. Wespi, H., influence of bile acid on elimination of bilirubin in urine, A., III, 121.

Wessels, V. E., effect of replacing dolo-mitic lime by baryta on some properties of glass, B., 544.

Wessely, F, and Jentzsch, K., bitter principles of calumba root. V. Methylation of columbin, A., II, 203.

Münster, A., and Wang, S., catalytic hydrogenation of saturated lactones, A., II, 483.

and Schönol, K. [with Münster, A., and Isemann, W.], chasmanthin, A., II,

See also Späth, E. Wesson, L. G., and Leonard, V., pure ethers of dinitrophenol, (P.), B., 879.

Wesström, N., and Lundin, G., artificial

fogs, (P.), B., 306. West, A. P. Sec Cruz, A. O., and Tanchico, S. S.

West, C. See Kidd, F., and Zilva, S. S.
West, C. D., optical properties and polymorphism of paraffins, A., I, 285. Structure ture of silver azide, AgN₃, A., I, 400. Crystallography of herapathite, A., I, 502.

West, D. H., automatic filtering set-up, A., I, 537.

West, E. See West, (Sir) F. J.

West, E. S., and Ney, L. F., catalysis of formaldehyde to reducing sugars by ascorbic acid, A., II, 5. See also Hafner, P. G., and Scott, J. E.

West, (Sir) F. J., West, E., and West's Gas Improvement Co., vertical retorts for carbonisation of coal and like materials,

(P.), B., 409. West, H. D., and Carter, H. E., synthesis of a-amino-β-hydroxy-n-butyric acids. III. Preparing a mixture of the two forms. IV. Separation of mixtures of the two forms and preparation of d(-)and l(+)-threonine, A., II, 328.

West, H. L., and Rollefson, G. K., photochemical reaction of chlorine with formic

acid, A., I, 39. West, P. M. See Laird, D. G. West, R. See Dakin, H. D., and Tyson,

West, S. D. See Bruun, J. H.

West, S. S. See Hughes, A. L. West, T. F. See Eastland, C. J., and Smith, G. E.

West, IV., and Arthur, P., Raman spectra of simple molecules in solution, A., I,

and Edwards, R. T., infra-red absorption spectrum of hydrogen chloride in solution, A., I, 112.

West, W. A., and Menzies, A. W. C., vapour pressures of saturated aqueous solutions, A., I, 463.

West's Gas Improvement Co., Ltd., Wilkin, C. R., and Sharpies, E., vertical retorts for carbonisation of coal, etc., (P.), B., 1008. See also West, (Sir) F. J.

Westberg, G. E., and Westberg, H. R. A., forming a suspension of cementitious material in air; [cement gun], (P.), B.,

Westberg, H. R. A. See Westberg, G. E. Westby, G. C., treatment of siliceous [manganese] materials], (P.), B., 692.

Westcott, C. H., diffusion of slow neutrons in hydrogenous media, A., I, 211. Absorbability in cadmium of neutrons slowed down in water and boric acid

solutions, A., I, 212. Westenbrink, H. G. K., specificity of resorption of monoses from the intestine of the rat and the pigeon, A., III, 92. Vitamin-B₁ and carbohydrate metabolism, A., III, 231. Westenbrink, H. G. K., and Goudsmit, J., determination of aneurin (vitamin- B_1) in urine by the thiochrome reaction, A., III, 439.

and Krabbe, H., effect of nerve-cutting on chemical composition of striped

muscle, A., III, 93.

and Polak, J. J., catatorulin effect, A., III, 281.

See also Goudsmit, J.

Wester, D. H., reaction with gold chloride on mustard gas, B., 396. Simple smell method for gas detectors; subjective methods for detection of offensive substances, B., 845. Objective methods for identification of war gases, B., 984.

Westergreen, E. E. See Doyle, J. P.

Westerhoff, H. See Popp, M.
Western Cartridge Co. See Olsen, F.
Western Chemical Co. See Dr See Dreyfus, M. E.

Western Condensing Co. See Peebles, D. D. Western Electric Co., Inc., dielectric materials and electrical apparatus using such materials, (P.), B., 460. Resistance units of silver sulphide and circuits utilising them, (P.), B., 937.

and Clifford, A. C., fibrous electrical insulation, (P.), B., 695. and Geisler, O., solid rectifying element,

(P.), B., 55.

and Hobrock, R. H., dielectric material, (P.), B., 55.

and Kagi, W. W., stirring of [molten metal] materials, (P.), B., 689.

and Lutz, R. P., manufacture and control of a lubricating compound [for wire drawing], (P.), B., 935.

and McLaughlin, L., ink [for firing on ceramic ware], (P.), B., 264.

and Rostás, E., photoelectric tube, (P.), B., 1364. Williams, Robert R., and Kemp, A. R.,

insulation for submarine cables, (P.), B., 361.

Western Lime & Cement Co. See Welch,

Western States Machine Co., centrifuging of sugar or similar substances for separation of syrup, (P.), B., 382. Treatment of [sugar] massecuite, (P.), B., 382.

See also Roberts, Eugene.

Westerveld, J., granites of the Malayan tin belt compared with tin-granites from other regions, A., I, 155.

Westfalia-Dinnendahl-Gröppel Akt.-Ges., pneumatic apparatus for separating dust from coal, etc., (P.), B., 13. Vibratory sieves, (P.), B., 303. See also De Vooys, G. J.

Westfall, B. B., and Landis, E. M., mol.

wt. of inulin, A., II, 53. See also Hendrix, J. P., Richards, A. N.,

and Smith, M. I. Westgren, A. See Aamark, K., Elander,

M., Lagerqvist, K., and Lundqvist, D. Westheimer, F. H., kinetics of benzilic acid rearrangement, A., I, 35. Salt effect in rearrangement of benzil-o-carboxylic acid, A., II, 195.

Westin, S., nuclear reactions, A., I, 59.

Westinghonse Brake & Signal Co., Ltd., and Comp. des Freins Westinghonse, apparatus for controlling supply of fluid under pressure, (P.), B., 997.

Westinghouse Electric & Manufacturing Co., Donaldson, H. C., jun., and Ford, J. G., fireproof [cable-]insulating compounds, (P.), B., 1230.

Westinghouse Electric & Manufacturing Co., and Halliwell, G. P., high-strength alloys, (P.), B., 933.

Hensel, F. R., and Larsen, E. I., [hardenable] copper alloys, (P.), B., 580. and Holler, H. D., insulating liquid [for

transformers], (P.), B., 695. and Lowry, E. F., [cobalt-nickel] alloy

[for valve filaments], (P.), B., 251. and McCulloch, Leon, cement, (P.), B., 142. Dielectric material, (P.), B., 695. Non-inflammable paint, (P.), B., 1242.

and Scott, H., [ferrous] metal-glass seal, (P.), B., 799. Annealing glass-to-metal seals, (P.), B., 914. Copper alloy [for commutators, etc.], (P.), B., 1226.

Weller, C. A., and Baker & Co., guide or support for molten glass, (P.), B.,

Westinghouse Lamp Co., and Gustin, D. S., glow-discharge device, (P.), B., 461. Clean-up agent for vacuum devices, (P.), B., 1231.

Weston, C. F., and Atmospheric Nitrogen Corp., nitrates, (P.), B., 908.

Weston, E. F. See Weston Electrical Instrument Corp.

Weston, M. T., continuous centrifugal washing and dewatering machine, (P.), B., 633.

Weston, W. A. R. D., Hanley, F., and Booer, J. R., seed disinfection. II. Large-scale field trials on disinfection of seed corn with mercury-dust disinfectants, B., 271.

See also Brett, C. C. Weston Electrical Instrument Corporation, and Weston, E. F., photo-electric photometers, (P.), B., 1365.

Westphal, K. See Andersag, H. Westphal, U., enol-acetates from progesterone and testosterone, A., II, 25. Enolic derivatives of progesterone and other a\beta-unsaturated steroid ketones, A., II, 505.

and Hellmann, H., attempted partial reduction of androstenedione, A., II,

Westphalen, C. H. See Mason, W. H. Wetherbee, H. L. See Seaver, J. J. Wetherill, C., and Holman Bros., purification of air and gases, (P.), B., 742.

Wetherill, S. P., counter-gravity die-casting of high-m.-p. metals, B., 1348. Wetherill Engineering Co., casting of

metals, (P.), B., 1229. Wetmore, F. E. W., and Gordon, A. R.,

activity coefficient of copper sulphate in aqueous solution, A., I, 135. Wetroff, G. See Moureu, H.

Wetter, F., and Dimroth, K., preparation of a homologue of epicoprosterol in the ergosterol series, A., II, 416, 455.

Wetterer, G., retardation of homogeneous neutrons by passage through substances containing hydrogen, A., I, 544.

Wetterlow, L. H. See Feemster, R. F.

Wetternik, L. See Schmidt, Max. Wettlaufer, W. L., and Tyler Co., W. S., erusher, (P.), B., 631.

Wettlegehoff Metgethen, substitution of potato flakes for crushed grain for laying hens, B., 390.

Wettstein, A. See Miescher, K. Wetzler-Ligeti, C., and Willheim, R., action of carotene on glycolysis of blood in cancer and in normal persons, A., III,

Wever, F., and Hänsel, H., transformation kinetics of austenite. VI. Decomposition of austenite in carbon steels, B., 920.

and Hild, K., transformation kinetics of austenite. V. Comparison of magnetisation and resistance isotherms of an age-hardening steel, B., 791.

and Lange, Heinrich, course of transformations in irreversible iron-nickel alloys,

A., I, 406.

and Möller, H., influence of alternating stresses on crystal structure of metals, A., I, 447.

Rose, A., and Eggers, H., iron corner in the ternary system iron-vanadium-carbon, A., I, 413. Wever, G. K. See Althausen, T. L.

Weydanz, automatic Orsat apparatus, B., 9. Weyde, E., warm tone development with "hypo," B., 90.
Weygand, C., and Werner, A., simplified

quantitative hydrogenation of milligrams and centigrams of substances, A., II, 529.

Weygand, F., the yellow enzyme, A., III, 314. and Stocker, H., preparation of yellow enzyme from yeast by an adsorption process, A., IlI, 314.

See also Kuhn, R. Weygandt, A. S. See Grasselli Chem. Co. Weyl, W., effect of fluorides on spectral absorption of some iron compounds; colorimetric determination of fluorine, A., I, 96. Chemistry of coloured glass. I.—III., B., 670.

and Rudow, H., determination of loss of lead from earthenware glazes with dithizone, B., 547.

See also Turner, W. E. S.

Whalley, H. K., spectrographic analysis of magnesium alloys, B., 925.

Whalley, W. See Walsall Conduits, Ltd. Wharton, M. F., and McGeorge, W. T. movement of salt (alkali) in lettuce beds under irrigation, B., 599.

Wheat, J. A., and Browne, A. W., temperature-concentration equilibria in the systems chloroform-chlorine and chloroform-bromine; chloroform chlorinates, A., I, 137.

Wheatley, M. A. See Levine, S. Z.

Wheeler, G. See Pincus, G. Wheeler, K. M. See Stuart, C. A. Wheeler, M. A., effect of absorbed hydro-

gen on magnetic susceptibility of manganesc, A., I, 557. Wheeler, M. W., and Crowe, M. O'L.,

conditions affecting production of toxin and porphyrins by diphtheria bacillus, A., III, 36.

Wheeler, T. S., theory of liquids. VI. Rate of reactions in liquids. VII. Diffusion and vapour pressure phenomena, A., I, 22, 34.

See also Rao, H. K. S., and Syed, I. Z. Wheeling Steel Corporation. See Reno,

R. E., jun.Wheeting, L. C., changes in organic matter in western Washington soils as a result

of cropping, B., 1248. Sce also Vlasoff, P. I.

Whelan, D. O. See Gen. Electric Co. Whelen, M. S. See Du Pont de Nemours

& Co., E. I. Whellock, R. B. See Howes, N. H. Whelpton, R. V. See Martin, L. C.

Whessoe Foundry & Engineering Co., Ltd., Grant, A. G., and Puttick, A., electrical precipitation of suspended particles from gases, (P.), B., 1075.

Whiddington, R. See Coles, S. B., Roberts, J. E., Swift, W., and Thorley, N. Whillock, R. H. See Bastow, S. H.

Whinfield, J. R. See Calico Printers'

Whipple, G. H., and Robscheit-Robbins, F. S., amino-acids (natural and synthetic) as influencing hemoglobin production in anemia, A., III, 418.

See also Datt, F. S. Whisler, B. A. See Faber, H. A.

Whistler, R.L., and Hixon, R.M., ring structure of a-methyl-l-sorboside, A., II, 485.

Whitaker, C. H. See Burk, R. E. Whitaker, D. M., effect of p_H on induction of polarity in Fucus eggs. I. Increased p_{II} and intensity of mutual inductions by neighbouring eggs of Fucus furcatus, A., III, 132.

and Lowrance, E. W., effect of p_H on induction of polarity in Fucus eggs. II. Effect of diffusion gradients brought about by eggs in capillary

tubes, A., III, 474.
Whitaker, M. D., magnetic scattering of neutrons, A., I, 544.

See also Langer, L. M.

Whitaker, R., and Hilker, L. D., effect of homogenisation at different temperatures on physical properties of milk and cream, B., 722. Sec also Roland, C. T.

Whitby, L. See Bengough, G. D., and Jordan, L. A.

Whitby, L. E. H., experimental assessment of therapeutic efficacy of amino-compounds with reference to p-benzylaminobenzenesulphonamide, A., III, 349.

Whitcomb, W. O., preparation of standard solutions for protein testing, B., 385. Oven spring of dough as influenced by sugar, salt, and yeast, B., 386.

White, Abraham (Aim Arbor), Catchpole, H. R., and Long, C. N. H., crystalline protein with high lactogenic activity, Ã., III, 375.

and Fishman, J. B., formation of taurine by decarboxylation of cysteic acid, A., II, 53.

and Stern, K. G., constitution of insulin. II. Reduced insulin preparations, A., 1II, 322.

See also Stern, K. G.

White, Abraham (Dorchester). See Standard Oil Development Co.

White, A. C., and Stedman, E., pharmacological and toxic actions of d- and l-

miotine, A., III, 350.

White, A. E., Clark, C. L., and Wilson, R. L., influence of time at 1000° F. on characteristics of carbon steel, B., 559. Influence of carbon content on hightemperaturo properties of steels, B., 791.

See also Giulio, A. D., Hildorf, W. G., and Schneidewind, R.

White, Addison H., two types of dielectric polarisation, A., I, 12.

and Morgan, S. O., molecular rotation in crystalline disubstituted ethanes, A., I, 499.

White, Alfred H. Sec Fleer, A. W.

White, Arthur H. See Hood, E. G. White, C. B., and Hooper & Sons, Co., W. E., treating [waterproofing] cotton fabric, (P.), B., 1330.

White, C. E., and Lowe, C. S., fluorescent test for aluminium, A., I, 580.

White, D. L., and Hood Rubber Co., mixing mill, (P.), B., 98.

White, D. O., and Cuthbertson, A. C., viscosity of vinyl acetate, A., I, 231.

White, E. A. See Goodwin, F. White, E. V., and Wright, G. F., micro-

chemical technique. I. Micro-methoxyI and micro-carbon-hydrogen determin-

ation, A., II, 128.

White, F. D., nutritive value of marine products. IX. Proximate analysis of British Columbia canned pilchard. Proximate analysis of ling cod, B., 973.

White, F. L. See Eastman Kodak Co. White, F. R., Lewis, H. B., and White, Julius, metabolism of sulphur. XXIV. Metabolism of taurine, cysteic acid, cystine, and peptides containing these

amino-acids, A., III, 128.
White, G. C. See Anderson, E. C.

White, G. S. J. See Imperial Chem. Industries.

White, H. A., rates of solution of gold and silver in cyanide solution, B., 571.
White, H. E., negative terms and broad

lines in the neutral calcium spectrum, A., I, 485. Hyperfine structure interval rule as means of classifying unidentified spectrum lines, A., I, 540.

White, Harold E., effect of plant nutrients, soil reaction, and light on gardenias, B., 480.

and Walton, S. F., particle packing and particle shape, B., 735. and Heinbecker, P., pituitary regulation

of water exchango in the dog and

monkey, A., III, 401. and Templeman, W. G., interaction of factors in growth of Lemna. X. Interaction of nitrogen and light intensity in relation to respiration, A., III, 159. See also Monaghan, (Miss) B. R.

White, James. See Hay, R.

White, Julius, and Bunting, R. W., possible relation between ammonia in saliva, and dental caries, A., III, 13. Comparison of chemical composition of stimulated and resting saliva of cariesfree and caries-susceptible children, A., III, 253.

See also White, F. R. White, J. D., and Rose, F. W., jun., isolation of isononane from petroleumits fractionation from naphthenes by distillation with acetic acid, B., 314.

White, J. F., and Mathieson Alkali Works, stain removal [from fabrics], (P.), B., 231. Chlorine dioxide, (P.), B., 669. Wilson, W. S., and Merrimac Chem. Co., ferric sulphate, (P.), B., 1047.

White, L. A. See Adlington, G. S. White, L. M., and Ross, W. H., influence of fertilisers on concentration of soil solution, B., 1100.

White, L. P., chlorine-ammonia treatment [of water] at Houston, Texas, B., 625.

White, M. \bar{E} . See Kohman, E. F. White, M. G., scattering of high-energy protons by oxygen nuclei, A., I, 160. See also Henderson, W.J.

White, Paul, electrosmotic circulation in closed vessels, A., I, 268.

See also Folley, S. J., and Lane, T. B. White, Philip, and Caughley, F. G. water absorption of [vegetable-tanned] sole leather, B., 267. Seasonal variations in [raw] lambskins [of New Zealand], with special reference to the sudoriferous glands, B., 374. Effect of water-solubles on wearing qualities of sole leather, B., 1381. See also Lloyd, (Miss) D. J.

White, Priscilla. See Root, H. F. White, P. C. See Kharasch, M. S.

White, P. J., anodic treatment of alumin-

ium and its alloys, (P.), B., 254. White, S.J. See Imperial Chem. Industries.

White, V. B. See Robbins, W. J.
White, W. P., and Roberts, H. S., mixing device for thermochemical calorimeters,

A., I, 478. White, W. R. See Noller, C. R.

White, Hughes & Co., Ltd., and De Phily, F., extraction of [precious] metal from ores, (P.), B., 1072.

Whitehead, C. See Low, A. H. Whitehead, H. R., and Hunter, G. J. E., activity of bacteriophage in lactic streptococci, A., III, 358.
Whitehead, J. B., and Mauritz, F. E.,

oxidation in insulating oil, B., 870.

Whitehead, T. H., Clay, J. P., and Hawthorne, C. R., effect of anions on titration of aluminium chloride, A., I, 477.

See also Pocock, R. W.
Whitehouse, A. G. R., sweating and permeability of human skin; report to committee on "the control of atmospheric conditions in hot and deep mines," A., III, 203.

Whitehouse, D., rollers for clay-grinding and other mills, (P.), B., 631.

Whitehouse, F. See Dadswell, C. J. Whitehouse, M. J., the dcuteric mineral

sequence in Enoggera granite, Queens-

land, A., I, 433. Whitelegg, C. J. See Bleachers Assoc. Whiteley, B. S. & W., Ltd. See Whiteley, W.

Whiteley, E., jun., and Wo-Bar Manufg. Co., [clectrical] cartridge fuses, (P.), B., 503. Whiteley, J. H., heterogeneity of steel ingots. III. Inclusions in bath samples from an electric furnace, B., 1349.
Whiteley, W., and Whiteley, B. S. & W.,

Ltd., papers, paper boards, etc., [for insulation], (P.), B., 230.

Whiteman, E. F. See King, F. B.
Whitesell, R. J., effect of soluble salts

formed during ageing on scumming of enamels, B., 548.

Whiteside, A. G. O., statistical significance of wheat-protein percentage differences in varietal trials, B., 167. Quality of rust-resistant hard red spring wheats under development in Canada, B., 1396.

Whitford, A. C., Allen, J. W., Kent, E. E., and Packer, H. W., fibre liberation and fibrilised products thereof, (P.), B., 772.

Whiting, L. D., cake-baking tests and selfraising flours, B., 387. Whitley, J. B. See Brockman, C. J.

Whitman, B., Wintersteiner, O., and Schwenk, E., β-cestradiol, A., II, 289. See also Schwenk, E., and Wintersteiner, O.

Whitman, G. M. See Finson, R. C.
Whitman, J. B. See Niederl, J. B.
Whitman, W. G. See Standard Oil Co.
Whitmer, C. A., and Pool, M. L., lithium

ion source [for nuclear work], A., I, 582. Whitmire, Le R. S. See Kamerer, J. W. Whitmore, F. C., Homeyer, A. H., Jones,

D. M., Trent, W. R., and Mallinckrodt Chem. Works, highly branched long-chain organic acids, (P.), B., 213.

Homeyer, A. H., and Mallinckrodt Chem. Works, acyl halides of tertiary butylacetic [β -methylisovaleric] acid, (P.), B., 213. Esters of tert.-butylacetic acid [hypnotics], (P.), B., 1134. Substituted amides of tert.-butylacetic acid, (P.), B., 1408.

Whitmore, F. C., Trent, W. R., and [yy-]dimethyl-1-[a-]bromobutane, (P.), B., 20. Mallinckrodt Chem. Works, [pure] 3:3-

Whitmore, H. B., dryer, (P.), B., 197. Whitmore, W. F., and Revukas, A., catalytic reduction of some azo-dyes and its application to identification of azo-dyes, B., 1180.

Whitnah, C. H., and Bogart, R., reproductive capacity of female rats as affected by kinds of carbohydrates in the ration, A., III, 61. Kunerth, B. L., and Kramer, M. M.,

rapid determination of lactoflavin in

milk, A., III, 341.
Riddell, S. H., and Caulfield, W. J., influence of storage, pasteurisation, and contamination with metals on stability of vitamin-C in milk, B., 1121. See also Cave, H. W., and Riddell, W. H.

Whitnall, A. B. M., fumigation of citrus trees with hydrocyanic acid gas, B., 1254.

Whitner, V. W. Sec Johnson, E. R. Whitney, L. V., thermionic emission of platinum, A., I, I05.

See also Wahlin, H. B.

Whitney, W. B. Sec Townley, R. W. Whiton, L. C., thermex recirculator and

controlled multicyclone, B., 1144. Whittaker, C. M., serviceability of fabrics,

B., 1040. Whittaker, C. W., Adams, J. R., and Jacob, K. D., hygroscopicity of fertiliser mixtures; effect of calcined phosphates,

B., 1384. See also Lundstrom, F. O.

Whittaker, D. See Imperial Chem. Indus-

Whittemore, J. W., effect of small additions of bentonite and ball clay to a whiteware mixture, B., 781.

and Bull, F. W., improving the physical properties of clays, B., 1050.

Whitleston, W. G., synthesis of 1:2:4-trimethyl-7-isopropylindene, A., II, 285.

Whitworth, F. T., flotation reagent, (P.), B., 692.

Whymper, R. See Nat. Sugar Refining Co. Whyte, S. See Cloudsley, J. L.

Wiadrowski, A., surface tension of aqueous solutions of cyanamide and carbamide, A., I, 300. Sorption of calcium cyanamide by certain kinds of soil, B., 165.

Wiard, E. S., settled solids-removing ap-

paratus, (P.), B., 198.
Wibaut, J. P., Lande, L. M. F. van de, and Wallagh, G., chlorination of ehlorobenzene in the gaseous phase at 500-600°; meta-directing influence of the chlorine atom, A., II, 181.

and Loon, M. van, bromination of halogenobenzenes in the gaseous phase: influence of temperature and catalysts on the substitution type, A., II, 140.

See also Jansen, H. E., Loon, M. van, Mayer, K., Spiers, C. W. F., and Wallagh, G.

Wiberg, E., structure of boron hydrides, A., I, 93.

and Mathing, W., parachor of boron trifluoride and boron trifluoride-ethers, A., I, 349.

and Rusehmann, W., new boric acid [hypoboric acid], H₄B₂O₄, and its esters, A., I, 420. Preparation of boron alkyls, B₂R₄, A., II, 371. See also Stock, A.

Wiberg, M., coal consumption in blast furnaces, B., 1347.

Wichmann, H. I. See Dahle, D. Wichterle, O. See Votoček, E. Wick, (Miss) F. G., triboluminescence of

certain natural crystals and synthetically prepared materials, A., I, 599.

Wick, G. C., diffusion of slow neutrons, A., I, 58. Annihilation of positive electrons, A., I, 387. Scattering of slow neutrons at atomic lattices. I. and II., A., I, 389, 544. Diamagnetism of superconducting bodies, A., I, 606.

Wick, O. J. See Wilson, Curtis L. Wickenden, R. T. D. See Fraser, F. J.

Wicker, D. B., vortex beater [for paper pulp], B., 768.

Wickerham, L. J. See Fabian, F. W. Wickert, J. N. See Carbide & Carbon Chemicals Corp., and Union Carbide & Carbon Corp.

Wickert, K., solvents, acids, bases, and salts, A., I, 306.

and Jander, G., chemistry in liquid sulphur dioxide. II. Substituted thionyldiammonium compounds and thionyldiquinolinium derivatives, A., II, 137.

See also Jander, G.

Wickey, S. A., Oliver-Campbell filter performance [in sugar-cane mills], B., 275. Wickland, A. A., metallurgical furnace, (P.), B., 579.

Wickmann, P. A., and Sylvania Industrial Corp., insulator [against light and thermal radiation], (P.), B., 856.

Wickwire, G. C., Burge, W. E., and Krouse, R., effect of copper on rate of disintegration of mammalian erythrocytes, A., III, 247.

Widdowson, E. M., English diets. I. Men, A., III, 16.

and McCance, R. A., English diets. II. Women, A., III, 16. Absorption and excretion of iron before, during, and after a period of very high intake, A., III, 473.

See also McCance, R. A.

Widell, T., calculation of rate of fall of dust particles, B., 299. Possibility of calculating calorific value of a fuel from the elementary analysis, B., 517.
Widenbauer, F., ascorbic acid in urine;

determination, A., III, 170.

and Koschorrek, K., production in vitro of vitamin-C by surviving tissue, A., III, 325.

and Kühner, A., ascorbic acid in lactating women, A., III, I54.

Widlake, H. C., electrolytic corrosion of gas mains, B., 747.

Widmann, E. See Schneider, Erich. Widmark, E. M. P. See Neymark, M.

Widmer, A., clarification of fruit wines with Bayer filtration enzyme, B., 76. Use of electro-katadyne apparatus for distinguishing various types of "böckser" in wine and fruit wine and in the laboratory, B., 77.

Widmer, J. M., and Penick & Ford, Ltd., sugar [glucose], (P.), B., 382.

Widstrom, G., biological test of adrenal preparations with white rats and mice, A., III, 149.

Wiebe, J., apparatus for removing filter

cake from rotary filters, (P.); B., 1289.
Wiebe, R., and Gaddy, V. L., solubility in liquid ammonia of hydrogen at 0° and of nitrogen at 0°, 50°, 75°, 90°, and 100° at pressures to 1000 atmospheres; critical phenomena of ammonia-nitrogen mixtures, A., I. 610.

Wiebenga, E. H. See Merckel, J. H. C.Wiecha, G. See Piratzky, W. Wiecławek, B. See Kling, K.

Wiedbranck, E. See Fulda, W. Wieder, L. M., fungistatic and fungicidal effects of two wood-preserving chemicals on human dermatophytes; sodium o-2-chlorophenylphenoxide and tetrachlorophenoxide, A., III, 181.

Wiederholt, W., protection of chemical plant materials, particularly by metallic

coverings, B., 1141.

Wiedmann, A., disturbances in liver metabolism in arsenobenzene poisoning, A., III, 179.

Wiedmann, G., and Schmidt, W., arc spectrum of mercury in the infra-red, A., I, 436.

Wiegand, E. See Gen. Electric Co.

Wiegand, E. H., Bullis, D. E., and Hatch, M. B., effect of sulphur sprays on corrosion of prune cans, B., 614.

Wiegand, E. L., electrostatic separation of particles, (P.), B., 1231.

Wiegand, W. B., carbon reinforcement of rubber, B., 473. $p_{\rm H}$ properties of colloidal carbon, B., 1153.

Wiehr, H., crystallisation of sodium silicate glasses, B., 546.
Wieland, H., Dietz, E., and Ottawa, H., bile acids. LVI. Dihydroxycholenic acids, A., II, 20.

and Horner, L., Strychnos alkaloids. XVIII. Constitution of vomicine; degradation of vomicidine, A., II, 217.

and Kanaoka, Y. [with Bachmann, W. E.], subsidiary sterols from yeast. V. Zymosterol and ascosterol, A., II, 416.

and Kimmig, J., Strychnos alkaloids. XVII. Deoxyvomicidine and other reduction products of vomicine, A., II, 126.

Konz, W., and Sonderhoff, R., curarine from calabash curare, A., II, 127.

and Kotzschmar, A., wing pigments of common white butterflies. III., A., II, 392.

and Mahlerwein, H., Strychnos alkaloids. XVI. 11-Amino- and 11-hydroxybrucine, A., II, 126.

Pasedach, H., and Ballauf, A., subsidiary sterols from yeast. IV. Cryptosterol, A., II, 243.

Ploetz, T., and Indest, H., occurrence of free radicals in chemical reactions. IX. Thermal decomposition of acylazotriphenylmethanes; mode of reaction of diacyl peroxides, A., II, 498.

and Probst, O., fluorene series. IV. Reactions of diphenylene-ethylene, A.,

II, 374.

and Wieland, T., toad poisons. X. Constitution of bufothionin, A., II,

and Wille, F., Strychnos alkaloids. XIX. Attempted degradation of oximino-

brucine, A., II, 473. and Zilg, W., mechanism of oxidative processes. XLVII. Induced reactions, particularly the "activation" of oxalic acid, A., II, 366.

Wieland, H.J. See Du Pont de Nemours & Co., E. I.

Wieland, K., spectrum of mercury chloride (HgCl) and Samuel's theory of linkage, A., I, 279.

Wieland, T., and Hsing, C. Y., synthesis and constitution of gramine, A., II, 38. See also Wieland, H.

Wiele, $J_{\cdot,\cdot}$ production of absolute alcohol by lime and pressure process, B., 1395.

Wiemann, J., Raman effect and organic chemistry: structure of the "oses," A., I, 10. . 3/5/19.2

See also Prévost, C.

Wien, M., dispersion determinations in region of decimetre waves, A., I,

See also Hackel, IV.

Wienhaus, H., resins of native [German] conifers, their constituents and changes during the working of wood, A., II, 510.

and Rajdhan, T. C., essential oils. I. Oil of Skimmia laureola, B., 87.

Wieninger, F. See Lüers, H. Wieninger, F. M. See Enders, C.

Wienshall, G. A., and Harrington, E. L., measuring absorption coefficients for X-rays by means of a tri-electrode ionisation chamber, A., I, 266.

See also Harrington, E. L.

Wierciński, J., conductometrie determination of magnesium by [titration with] sodium hydroxide solution, A., I, 262. Mercurimetric determination of phosphòrus pentoxide in phosphates, B., 540. Determination of nitrogen in granulated cyanamide in presence of nitrate, B., 1167.

Wieringa, $K.\ T.$, See Söhngen, $N.\ L.$ Wiersma, $J.\ T.$ See Clay, J. Wiersum, $L.\ K.$ See Kuiiper, J.

Wierz, M., determination of unburnt carbon from flue-gas analysis, B., 202. Wierzchowski, P., oxidation of safrole and isosafrole by selenium dioxide, A., II,

Wierzuehowski, M., limiting rate of assimilation of glucose introduced intravenously at constant speed in the resting dog, A., III, 130. Temperature of glucose solution and "superabundance" diabetes, A., III, 205. Wiese, O. See Schenck, F.

Wiesehahn, G. A., soya-bean phosphatides and their uses, B., 838. Wiesemann, W. See Müller, Eugen. Wiesenberger, E. See Jantsch, G.

Wiessner, P., heating of fluids in chemical industry by means of electrical [induced] currents, B., 854.

Wiesthaler, H.; diagrammatic representation of aluminium alloys, B., 451.

Wietbrock, R. See Wittig, G.

Wiezevich, P. J. See Standard Oil Development Co.

Wigankow & Sachse, Neuzeitlicher Strassenbau G.m.b.H., road-making material, (P.), B., 41.

Wiggins, D. H., and Davison Chem. Corp., medicament [for toxemia], (P.), B.,

Wiggins, W. R. See Imperial Chem. Industries.

Wiggle, F. J. See London Brick Co. Wigglesworth, F. W. See Lindsay, L. M. Wiggs, A. E. See Morgan Crucible Co. Wight, E. H. See Shoeld, M.

Wightman, E. P. See Sheppard, S. E. Wigner, E., consequences of symmetry of the nuclear Hamiltonian on spectroscopy of nuclei, A., I, 110. Structure of nuclei beyond oxygen, A., I, 440. Calculation of the rate of elementary association reactions, A., I, 569.

and Breit, G., β-ray spectrum of ⁸Li, A., I, 108.

See also Breit, G., and Feenberg, E.

Wiig, E. O., photochemical investigations. III. Effect of cell size on the quantum yield for the decomposition of ammonia. IV. Photochemical decomposition of deuterammonia, A., I, 370,

. 10.

See also Barnes, S. W.

Wijk, A. van. See Nierkerk, J. van. Wijk, C. M. van, Botha, M. L., and Bekker, J. G., effect of supplementing the diet with different forms of sulphur on wool of merino sheep, A., III, 209.

Wijk, D. J. van, influence of fillers on properties of vulcanised rubber, B., 160. Examination and storage of rubber parts

for gas masks, B., 504.

Wijk, W. van. Sec Liempt, J. A. M. van.

Wijk, W. R. van, determination of cloud point of dark oil, B., 11. Measuring attack of weak corroding agents [on

metals], B., 575. Wik, S. N. See Bent, F. A.

Wilbaux, R., causes of acidity of palm oil, B., 152.

Wilborn, F., present state of coating [paint and varnish] chemistry, B., 368.

Wilbrandt, W., effect of organic ions on membrane potential of nerves, A., III, 215. Relationship between the permeability of the red cell and its metabolism, A., 111, 369.

Wilbur, J. See Bacon, R. F. Wilbur, J. W. See Hague, S. M., and Loy, W. C.

Wilcke, H. L., relative value of farm grains in poultry nutrition, B., 1129.

Wilcox, G. S. See Smith, G. Frederick. Wilcox, H. W. See Link, G. K. K. Wilcox, L. V., determination of potassium

by means of an aqueous solution of trisodium cobaltinitrite in presence of nitric

acid, A., I, 261. Wilcox, M. S. See Bergman, H. F. Wilcox, R. See Emmons, R. C.

Wilcox, R. J., high-chromium alloyscentrifugal castings and tubes, B., 795.

Wilcox, R. L., and Bossard, J. R., selfrecording apparatus for thermal analyses [of metals and alloys], B., 578. See also Fuller, M. L., and Truesdale,

E. C.Wilcoxon, F., preparation of plant growth-

promoting substances. I. Ethyl naphthylglyoxylate; a naphthylglycollic acid; a-naphthylacetic acid, A., II, 456. Wild, G. L. E. See Walker, O. J.

Wild, W. See Spence, R.
Wilde, S. A., soil nematodes in forest nurseries, B., 73.
Buran, S. F., and Galloway, H. M.,

nutrient content and base-exchange properties of organic layers of forest soils in the Lake States region, B., 1384. Wilder, F. W. Seo Bethke, R. M.

Wilder, G. H., and Du Pont Viscoloid Co., [cast phenolic] resins, (P.), B., 470.

Wilder, H. K., and Kellogg Co., treatment of coffee, (P.), B., 85. Wilder, O. H. M. See Bethke, R. M.

Wilder, R. M., Kendall, E. C., Snell, A. M., Kepler, E. J., Rynearson, E. H., and Adams, M., intake of potassium in Addison's disease, A., III, 171.

Wilder, V. M. See Spencer, H. C. Wilder, W. S., electronic problem in flue gas control, B., 1143.
Wildman, J. D., determination of moulds

in cream or butter, B., 490. Wildschut, A. J., electrical properties of technical rubber mixtures, B., 66.

Wildt, R., low-dispersion of red stars, A., I, 110.

Wile, U. J., Cameron, O. J., and Eckstein, H. C., effect of Röntgen rays on lipins of the epidermis, A., III, 175.

Wiles, A. E. See Hill, P.

Wiley, F. H., Hueper, W. C., and Oettingen, W. F. von, toxic effects of low concentrations of carbon disulphide, A., 111, 95.

See also Newburgh, L. H. Wiley, M. See Ramage, A. S.

Wiley, R. M. See Dow Chem. Co. Wiley, S., pyrotechnic composition, (P.), B., 624.

Wilford, A. T., fuel oils for small com-

pression-ignition engines, B., 869.

Wilgus, H. S., jun., Norris, L. C., and
Heuser, G. F., rôle of manganese and certain other trace elements in the prevention of perosis, A., III, 462.

and Van Wagenen, A., height of the firm albumin [of eggs] as a measure of its condition, B., 613.

Wilhelm, E. J., and New Jersey Zinc Co., coating of zinc or cadmium base metals, (P.), B., 691.

Wilhelm, H., manufacture of unalloyed mild steel from scrap in basic openhearth furnace without special manganese

additions, B., 558.
Wilhelm, H. A., quantitative spectrographic analysis; increased accuracy in logarithmic sector method, A., I, 331.

Wilhelm, J. O. See Johns, H. E.Wilhelm, L. A. See Heiman, V. Wilhelmi, A. E. See Fisher, R. B.

Wilhelmj, C. M., McCarthy, H. H., and Hill, F. C., acid inhibition of the intestinal and intra-gastric chemical phases of gastric secretion, A., III, 377. O'Brien, F. T., and Hill, F. C., effect of

the pylorus on sccretion of acid by

the fundus, A., III, 169, 377.

O'Brien, F. T., McCarthy, H. H., and Hill, F. C., rôle of duodenal secretions in prevention of experimental jejunal ulcer, A., III, 254.
Wilhelmy, E., production of artificial

a-rays by resonance, A., I, 212.

Wilke, G., water-gas from semi-coke, B., 515. Wilke, R. See Vorländer, D.

Wilken-Jorden. Seo Rossouw, S. D.

Wilkie, J. B., determination of vitamin-A with the Hilger vitameter, B., 976. Wilkin, C. R. See West's Gas Improve-

ment Co.

Wilkins, A. See Kearns, H. G. H. Wilkins, E. T., treatment of coal with oil;

dust-proofing process, B., 310. Wilkins, H. L., extraction of the nitro-

genous materials from dried grass, B., 837. See also Vinall, H. N.

Wilkins, R. A., copper and copper-base alloys in construction of corrosionresistant equipment and structures, B., 143.

and Revere Copper & Brass, Inc., weldingrod [copper] alloys, (P.), B., 250.
[Copper-base] alloys, (P.), B., 691.
Wilkins, R. W., Taylor, F. H. L., and
Weiss, S., bisulphite-binding substances

in blood in health and disease (vitamin- B_1 deficiency), A., III, 165.

Wilkins, T. R., characteristic a-ray tracks in infected photographic emulsions, A., I, 543.

See also Rayton, W. M., Sheppard, S. E., and Wolfe, R. N.

Wilkins, W. E., and Jones, H. D., ashing plasma and whole blood for determination of chlorides, A., III, 113.

Wilkinson, H. See Lowery, H., and Sykes, C.

Wilkinson, Harry. See Pritchard, H. Wilkinson, J. F., value of extracts of adrenal cortex in the treatment of Addison's disease, A., III, 360.

and Ashford, C. A., vitamin-C deficiency in Addison's disease, A., III, 44.

Wilkinson, L., Bathurst, N. O., and Parton, H. N., equilibria in aqueous lead chloride solutions, A., I, 308.

Wilkinson, W., Balcar, F. R., and Air Reduction Co., alcohols, (P.), B.,

Schlitt, J. L., and Air Reduction Co., separation and recovery of krypton and xenon from gaseous mixtures containing them, (P.), B., 669,

See also Air Reduction Co.

Willard, H. H., and Fogg, H. C., separation of gallium and its colorimetric determination by means of quinalizarin, A., I, 149. Precipitation of basic gallium sulphate by means of carbamide. I. Study of the precipitate produced, A., I, 473.

and Goodspeed, E. W., separation of strontium, barium, and lead from calcium and other metals by precipit-

ation as nitrates, A., I, 46.

and Tang, N. K., precipitation of aluminium basic sulphate by carbamide, A., I, 473. Determination of aluminium by precipitation with carbamide, A., I, 532.

See also Spokes, R. E. Willard, M. L. See Snrmatis, J. D., and Zerbey, M. E.

Willard Storage Battery Co. See Reinhardt, W. L.

Willaume, F., and Binder, O., ultraviolet absorption spectra, determined by reflexion, of some basic copper salts and other fungicides and insecticides, B.,

959. Willcock, R. B., buffered [photographic] developers, B., 1409.

Willcomb, G. E., iron and manganese in water, B., 297.
Willcox, V. R. See Taylor, M.

Willcox, (Sir) W., clinical immunity, A., III, <u>5</u>.

Wille, F., and Mohr, A., jun., gas-cleaning and sludge-recovery system, B., 639. See also Wieland, H.

Wille, H. See Friese, H.

Wille, J., determination of sodium in cheese and neutralised milk products, B., 80.

Wille, R. See Eicke, S.

Willemart, A., dissociable anthracene oxides; photo-oxides of 9-phenyl-10-methyl- and of 9-phenyl-10-ethylanthracene; photo-oxides of mesoditolylanthracenes, A., II, 93, 237.

Willems, F., improved apparatus for determining total oxygen in iron by the vacuum melting method in a graphite

special furnace, B., 444.
Willems, P. J. H. See Ketelaar, J. A. A.
Willenborg, W. J., and U.S. Fire Protection Corp., analysis of gases by differential thermal conductivity measurements, (P.), B., 857.

Willets, W. R., titanium pigments [in papermaking], B., 156.

Willett, J. C., improved [bacteriological] laboratory apparatus, A., III, 227.

Willey, A. R., and Hazel, F., ratio of electro-osmotic mobility along a flat surface to electrophoretic mobility of particles of ultramicroscopie size, A., I, 461.

Willey, E. J. B., mechanism of chemical reaction in the electric discharge, A., I, 91. Inaccuracies in spectrographic research, A., I, 336. Chemical reaction in the electric discharge. II. Synthesis of nitric oxide, A., I, 370.

Willey, F. E., tastes and odours as found in the Kaw River water, B., 849.

Willey & Co., Ltd. See Johnson, E. R. H. Willheim, R. See Aszkenazy, C., König-

stein, R., and Wetzler-Ligeti, C.
Williams, A. E. See Badger, A. E.
Williams, A. H., coating metal articles [window frames] with zinc, (P.), B., 933.

Williams, A. L. Sec Finch, G. I. Williams, C. F., copper as an alloying agent in steel and cast iron, B., 1215.

Williams, C. G., cylinder wear in gasoline

engines, B., 109.
Williams, C. H. B., Follett-Smith, R. R., and Cameron, C., field experiments with sugar cane. VI., B., 1104.
Williams, C. L. See Deem, A. W.

Williams, C. R., petrographic method of dust analysis, B., 297.See also Bennett, E. O.

Williams, C. S. See Du Pont de Nemours & Co., E. I.

Williams, David, sulphur deposits of the Sierra de Gádor, Province of Almeria, Spain, A., I, 586.

Williams, Dudley, infra-red absorption of hydrogen chloride in non-ionising solvents, A., I, 8. Infra-red absorption of hydrogen halides in organic solvents, A., 1, 218. Infra-red absorption of cyanides, thiocyanates, and their isomerides, A., I, 495. Infra-red absorption spectrum of liquid water, A., I, 548. Application of infra-red spectro-

scopy to rubber chemistry, B., 473. Gatica, T., and Gordy, W., infra-red absorption of mixtures of water and organic liquids, A., I, 443.

and Gordy, IV., infra-red absorption of mixtures of methyl alcohol with ethyl formate and with ethyl acetate, A., I, 343.

and Plyler, E. K., infra-red absorption of heavy acid solutions, A., I, 166.

and Rogers, L. H., infra-red absorption spectrum of vitamin-C, A., I, 495.

and Taschek, R., effects of clastic stretch on infra-red spectrum of rubber, B., 1091.

Weatherford, R. D., and Plyler, E. K., infra-red absorption spectra of mixtures of alcohol and water, A., I, 281.

Williams, D. J. See Bolton, B. Williams, E. C. See Bataafsche Petroleum Maats., Internat. Hydrogenation Patents Co., and Shell Development Co.

Williams, E. F. See Chibnall, A. C. Williams, E. G. See Imperial Chem. In-

dustries, and Perrin, M. W. Williams, E. H. See Kress, O., and Moffitt, W. G.

Williams, E. J., primary ionisation in helium and hydrogen, A., I, 209.
Williams, E. T. R. See Ludewig, S.

Williams, F. A. See Booth, N.

Williams, F. C., apparatus for coating with metal by dipping, (P.), B., 455.

Williams, F. I., centrifugal machine, (P.), B., 633. Driving mount for centrifugals, (P.), B., 633.

Williams, F. J. See Taylor, N. W. Williams, F. M., smoothness, porosity, and printability of paper, with new methods for determination, B., 1189.

Williams, F. R. See Dippy, J. F. J. Williams, G., kinetics of catalysed poly-

merisation of styrenc, A., I, 572. and Lawrence, A. S. C., rupture of carbon-nitrogen bonds; kinetics of thermal decomposition of ω-azotoluene vapour, A., I, 34. Kinetics of thermal decomposition of benzylideneazine vapour, A., I, 34.

Williams, H. B. See Norris, E. R. Williams, H. H., and Anderson, W. E., relation of lipins to physiological activity, A., III, 265.

Erickson, B. N., Bernstein, Samuel, Hummel, F. C., and Macy, I. G., lipin and mineral distribution of serum and erythrocytes in pernicious anæmia (before and after treatment), A., III, **255.**

Melville, J., and Anderson, W. E., cholesterol and fatty acids in blood-plasma of male and female rats, A., III, 291. See also Erickson, B. N.

Williams, H. M., and Gen. Motors Corp., refrigeration, (P.), B., 740.

Williams, I., swelling and solvation of rubber in different solvents, B., 373. See also Du Pont de Nemours & Co.,

E. 1.

Williams, J. A. See Buehrer, T. F., and Greene, R. A.

Williams, J. C.See Hood, G. R. Williams, J. E.

See Follett-Smith, R. R. Williams, J. F., conductometric determination of ash in cane molasses, B., 276.

Williams, Jesse F., apparatus for measuring hardness or [compressive] strength of materials, (P.), B., 858.
Williams, J. H., dense iron castings, B.,

Williams, J. H. (South Kensington). See Linstead, R. P.

Williams, John H., Shepherd, W. G., and Haxby, R. O., instability of ⁵He, A., I, 389. Disintegration of lithium by deuterons, A., I, 593.

Wells, W. H., Tate, J. T., and Hill, E. L., resonance process in the disintegration of boron by protons, A., I, 212.
Williams, John Warren, and Watson, C. C.,

spinning-top ultracentrifuge and the sedimentation of small molecules, A., I, 100. Dissociation of ovalbumin in urea solvent, A., III, 199.

See also Albright, P. S., Arnold, O. M., and Bridgman, W. B.
Williams, Jonathan W. See Hurd, C. D.

Williams, K. A. See Bolton, E. R. Williams, L. L. See Stearns, L. A.

Williams, M., condenser for acetic acid fumes arising from acetifiers, (P.), B., 649.

Williams, N. E.See Simpson, J. C. E. Williams, N. H. See Dent, F. J.

Williams, P. C. See Cutting, W. C., and Dodds, E. C.

Williams, P. H., growth of Oospora (Monilia) fimicola, white plaster mould of mushroom beds, B., 1252.

Williams, P. S., apparatus for measuring temperatures, (P.), B., 3.

and Johnson, Oliver W., apparatus for measuring temperatures, (P.), B., 3.

Williams, R., solubility of soil-phosphorus and other phosphorus compounds in sodium hydroxide solutions, B., 595.

Williams, R. C., and Gibbs, R. C., fine structure of a-lines of hydrogen and deuterium, A., I, 539.

See also Gibbs, R. C.

Williams, R. D., and Olmsted, W. H. [with Hamann, C. H., Fiorito, J. A., and Duckies, D.], effect of cellulose, hemicellulose, and lignin on weight of the stools, A., III, 260.
Williams, R. F., physiological ontogeny in

plants and its relation to nutrition. II. Effect of phosphorus supply, B., 70.

Williams, R. J., organic oxidation equivalent analysis. I. Theory and applications, A., II, 222. Use of yeast or other fungi for vitamin-B, tests, A., III, 495.

Rohrman, E., and Christensen, B. E., organic oxidation equivalent analysis. II. Use of iodate (micro and "submicro" methods), A., II, 222.

and Woods, M. A., selectivity of iodio acid in oxidation of organic compounds, A., II, 361.

See also Christensen, B. E., and Mosher, W, A.

Williams, Robert R. (Columbia Univ., New York), beriberi vitamin, A., III,

and Cline, J. K., synthetic vitamin- B_1 , A., III, 153.

Ruehle, A. E., and Finkelstein, J., crystalline vitamin-B₁. XV. Cvitamin- B_1 . Methylated 6-amino- and 6-hydroxy-

pyrimidines, A., II, 212. See also Cline, J. K., and Vorhaus, M. G. Williams, $Robert\ R$. (Roselle). See West-

ern Electric Co.

Williams, R. T., derivatives of hydroxymethoxysuccinic acids, and some related amides, A., II, 441. See also Thorpe, W. V.

Williams, Samuel, correlation phenomena and hormones in Selaginella, A., III, 329. Williams, Stanley. See Jones, E. H.

Williams, S. C., calcium in meat cooked with acid, B., 613.

Williams, S. D., intermediate alloy steels for high-temperature application [in petroleum refineries], B., 1215. and Copperweld Steel Co., bimetallic

wire [copper-coated steel], (P.), B.,

Williams, S. V. See Gen. Electric Co. Williams, S. W., and Panting, R. M., treatment of aspirin poisoning by intravenous sodium lactate solution, A., III, 218.

Williams, T. D., and Amer. Steel & Wire Co. of New Jersey, heat-treating apparatus, (P.), B., 738.

Williams, V. G. See Delamere, R. D. Williams, V. H. See Imperial Chem.

Industries. Williams, W. E., electron-discharge appar-

atus, (P.), B., 1231. Williams, W. L., identification of strepto-

coccus of mastitis in milk, A., III, 275. Williams, W. P. See Schering-Kahlbaum Akt.-Ges.

Williamson, J. H. See Poe, C. F.

Williamson, R. C., Raman frequencies of dioxan, A., I, 497.

Williamson, R. W., laminated [wallboard] material, (P.), B., 677.

Williamson, S. See Bell, D. J., and Green, D. E.

Williamson, W.O., darkening of commercial titanium dioxides in daylight, B., 1045. Willingham, C. B. See Mair, B. J.

Willis, C. L. See Willis, J. M. Willis, E. A. See Hogentogler, C. A. Willis, J. A. V. See Francis, F.

Willis, J. M., and Willis, C. L., apparatus for de-airing clay and similar plastic substances, (P.), B., 347.

Willis, L. G., and Piland, J. R., response of lucerne to borax, B., 1252.

Willkie, H. F., Boruff, C. S., and Althausen, D., controlling gin flavour, B., 278. and Continental Distilling Corp., purification of distilled alcoholic [potable]

spirits, (P.), B., 1396. Willmann, J., tempering of cream, (P.), B., 495. Treatment of cream, (P.), B., 1266*.

Willott, W. H. See Jones, F. L. Willows, R. See Burden, W. M.

Wills, C. H., molybdenum alloy steels, (P.),

Wills, L., Clutterbuck, P. W., and Evans, B. D. F., production and cure of macrocytic anæmias, A., III, 204.

Willshaw, H. See Dunlop Rubber Co.

Willson, R. J. See Horst, K.

Willstaedt, H., pigment of the cloudberry, Rubus chamamorus, L., A., III, 245. Biological conversion of carotene into vitamin-A, A., 1II, 439.

Willstätter, R., and Rohdewald, M., glycogenolytic system in liver and influence on it of insulin and adrenaline, A., III, 142. Enzymes of leucocytes. X. Synthesis and degradation of glycogen by leucocytes, A., III, 247. First phase of fermentation by yeast, A., III, 355.

Wilman, H. See Finch, G. I.

Wilmanns, H., micro-determination of iodine in biological material, A., III, 82. See also Löhr, H.

Wilmington Fibre Specialty Co. Horvath, A. A. Wilmot, H. F. See Cassidy, T. A.

Wilmot & Cassidy, Inc. See Cassidy, T.A.Wilmot Engineering Co., hydro-separators, (P.), B., 511. See also Menzies, W. C.

Wilputte, L. N., coke-oven doors, (P.), B., 1009.

and Pavitt, W. H., heat distribution in a modern coke oven, B., 514.

Wilshaw, R. G. H., padi manurial and minor cultural trials 1935-6, B., 272.

Wilsmann, W., standardising the fat content of milk for manufacture, B., 1398.

Wilson, A. See Pijoan, M.

Wilson, A. C., and Davison Chem. Corp., crystallising and product thereof [calcium sulphate], (P.), B., 667.
Wilson, A. H., second-order electrical

effects in metals, A., I, 450.

Wilson, A. J. C. See Bronson, H. L. Wilson, A. L. See Carbide & Carbon Chemicals Corp.

Wilson, $A.\ M.\$ See Standard Oil Development Co.

Wilson, A. R., chocolate-spot disease of broad and field beans, B., 378.

Wilson, B. D., and Staker, E. V., ionic relationships in peat, B., 705.

Wilson, C. See Craig, R. Wilson, C. E., and Lucas, H. J., stereochemical relationships of isomeric butane-By-diols and related compounds; evidence of Walden inversion, A., II, 44.

Wilson, Christopher L. See Bailey, C. R., and Ingold, C. K.

Wilson, Curtis L., and Wick, O.J., cadmiumindium alloy system, A., I, 608.

Wilson, C. P., jun., stabilisation of unsaturated hydrocarbons, (P.), B., 1163. Oil-soluble polyhydric phenols, (P.), B., 1176. Oil-soluble phenols [and stabilised petrol], (P.), B., 1314.

Wilson, D., influence of high temperatures

on stud-bolt steel, B., 143. Wilson, D. A. See McBain, J. W.

Wilson, D. M., verification of specifications for asphalt, B., 10. Safe road surfaces, B., 443.

Wilson, D. T. See Stevens, A. N.

Wilson, D. W. See Irvin, J. L., and Moore, E.

Wilson, E. A. See Webber, C. S.

Wilson, E. B., jun., vibration-rotation energy levels of polyatomic molecules. III. Effect of centrifugal distortion, A., I, 501.

See also Gershinowitz, H.

Wilson, E. D., and W.-B. Chem. Co., xanthates, (P.), B., 134.

Wilson, E. O. See Lin, C. Y. Wilson, E. W. See Hedquist, A. J.

Wilson, F. J. See McLean, J.

Wilson, G. C., and Rose, R. A., behaviour of high- and low-cetane Diesel fuels, B., 1157.

Wilson, G. S., resistance to infection with Bact. typhimurium of mice fed on raw and pasteurised milk, A., III, 344.

and Maier, I., nutritive value of raw and pasteurised milk for mice, A., III, 343.

Minett, F. C., and Carling, H. F., nutritive value of raw and pasteurised milk for calves, B., 725.

Wilson, Hewitt, and Middleton, G. J., purification of kaolin; classification of quartz and muscovite, B., 548.

and Skinner, K. G., equations and quadrant charts for determining heat and air requirements of continuous dryers, B., 508. Occurrence, properties, and preparation of limestone and chalk for whiting, B., 903.

See also Kobe, K. A.

Wilson, Hildegarde, and Cannan, R. K., the glutamic acid-pyrrolidonecarboxylic acid system, A., 1, 411.

Wilson, H. A., energy levels of the nuclei of light elements, A., I, 546.

Wilson, H. E. C., Ahmad, B., and Majumdar, B. N., metabolism of carotene, A., III, 323.

Ahmad, B., and Mullick, D. N., ash, calcium, and phosphorus content of some common Bengali food-stuffs, A., III, 367.

Ahmad, B., Ray, G., and Guha, R. C., vitamin-B₁ content of some common Indian food-stuffs, A., III, 364.

Das-Gupta, S. M., and Ahmad, B., absorption of carotene and vitamin-A in man, A., III, 363.

and Mookerjee, S. L., absorption of rice and atta protein in digestion and the question of the fæcal residue as a medium for intestinal putrefaction, A., III, 303. Causation of vesical calculus in India; composition of human urine on different diets, A., III, 303. Wilson, H. N. See Hughes, W. C.

Wilson, J. See Topley, W. W. C.

Wilson, John. See Triplex Safety Glass Co. Wilson, J. A., electronic theory of tanning. IV. Chrome tanning. V. Phosphate tanning, B., 68, 704. Effect of p_H value on [vegetable] sole-leather tanning, B., 162. Bleaching animal skins with permanganate preparatory to tanning, B., 475.

Wilson, J. D., improving stands of vegetables on muck [soil], B., 169. Bordeaux mixture substitutes on cucurbits, B., 171.

and Livingston, B. E., lag in water absorption by plants in water culture with respect to changes in wind, A., III, 235.

Wilson, J. G. See Blackett, P. M. S. Wilson, J. H. See Buzzard, R. W. Wilson, J. K., and Webb, H. J., soluble carbohydrates in crops used for silage, B., 726.

Wilson, J. N., bentonite: its uses in

industry, B., 1199.
Wilson, J. Norton, and Dickinson, R. G., measurement of a reaction rate at equilibrium by means of a radioactive indicator; reaction between arsenic acid and iodine, A., I, 466.

Wilson, J. R. See Bell Telephone Labs. Wilson, J. S., treatment and preservation of blood for medicinal purposes, (P.), B., 392.

Wilson, L. D., automatic levelling device for gas collection by downward displacement of mercury, A., I, 50.

Wilson, M. F. See Ewing, D. T.

Wilson, O. H., coke-oven equipment, (P.), B., 1300.

Wilson, P. H. See Ridley, W.

Wilson, P. W., apparent nitrogen assimilation of germinating peas, A., III, 48. Excretion of nitrogen by leguminous plants, B., 1103.

and Fred, E. B., mechanism of symbiotic nitrogen fixation. II. The pO₂ function, A., III, 433.

See also Orcutt, F. S., and Umbreit, W. W.

Wilson, R. See Newns, G. H.

Wilson, Raymond, estimating efficiency of

Wilson, Raymona, estimating enteriney of [cement] pulvorisers, B., 914.

Wilson, R. C., jun. See O'Kelly, A. A.

Wilson, R. E. See Standard Oil Co.

Wilson, R. L. See White, A. E.

Wilson, R. N., handling of slag, (P.), B., 147.

Wilson, R. V., packaging fly sprays in cens. B. 307 cans, B., 397.

Wilson, R. W., heavy accessory minerals of the Val Verde tonalite, A., I, 270. Plating by the ampère-hour-meter method, B., 146.

Wilson, S. D. See Benedict, F. G.
Wilson, W. See Hawley, J. W.
Wilson, W. C. Seo Kratz, E. M.
Wilson, W. J. See Haworth, W. N.
Wilson, W. S. See White, J. F.
Wilson, W. T., curling of animal-fibre
yarn, (P.), B., 1322.

Wilster, G. H., Price, W. V., Morris, A. J., Goss, E. F., and Saunders, G. P., determination of fat, moisture, and salt in hard

cheese, B., 491.

Wilten, H. M., corrosion of condenser tubing in a Gulf Coast oil refinery, B., 446. Wilton, N., and Rappold, H., apparatus

for washing gases, (P.), B., 635.
Wilton, T. O., distillation and cracking of tars, oils, and similar liquid hydrocarbons, and of fats, (P.), B., 130I. Wimmer, G., and Lüdecke, H., can nitro-

gen manuring of sugar beet be further increased? B., 1104.

Lüdecke, H. [with Hüllweck, G.], influence of agricultural methods and fertilisers on content of beet nematode cysts in the soil, B., 170. See also Krüger, IV.

Winans, C. F. See Adkins, H.

Winberg, H., and Brandt, K. M., intermediate products in fermentation of maltose, A., III, 33.

Winchell, A. N., chlorite, A., I, 154. Zeolites, A., I, 270.
Winchester, C. F., stop-cocks for mechanical operation, A., I, 100.

Winchester, G., and Murray, T. J., effect of liquid air temperature on bacteria, A., III. 101.

Winchester, R., and Yntema, L. F., quantitative electrodeposition of zinc from acid citrate solutions, A., I, 426.

Winckel, M., juices of green malt and embryos, B., 616.

Windaus, A., and Bock, F., pro-vitamin from sterol of pigskin, A., III, 156. and Deppe, M., derivatives of neoergo-sterol, A., II, 99:

and Dimroth, K., constitution of lumisterol and of the product of action of heat on vitamin-D₂ (calciferol), A.,

and Kuhr, E., sulphonic acids of sterol derivatives, A., II, 504.

and Rennhak, S., derivatives of I:2-benzpyrene, A., II, 491.

and Stange, O., pro-vitamin of sterol of eggs, A., III, 79.

and Trautmann, G., crystalline vitamin- D_4 , A., III, 327.

Windbicher, V. Seo Grassmann, W. Windbecker, C. N., sewage [sludge] disposal apparatus, (P.), B., 986. and Lyon, C. E., treatment of sewage,

(P.), B., 986.
Winder, C. V., mechanism of stimulation of

carotid gland chemoreceptors, A., III, 388. Winder, F. J., and Surface Combustion

Corp., apparatus for heat treating steel, (P.), B., 1224.

Swift, L. L., and Surface Combustion Corp., annealing apparatus, (P.), B., 738, 1224.

Windheuser, C. See Wöhlbier, W. Winding, C. C., chemical engineering labor-

atory equipment; experimental forcedcirculation evaporator, B., 988.

Wing-Easton, N., tin ores of Banca, Billiton, and Singkep, Malay Archipelago. I. and IL., A., I, 382.

Winge, O., and Lausten, O., two types of spore germination: genetic segregations in Saccharomyces demonstrated through single spore cultures, A., III, 483.

Wingert, W. B., and Semet-Solvay Eng. Corp., apparatus for producing fixed combustible gas, (P.), B., 1009.

Wingfield, B., and Acree, S. F., temperature and hysteresis errors in calomel

half-cells, A., I, 581.
Wingfield, B. T., applications and limitations of self-operating temperature

regulators, B., 399.
Wingfield, C. A., function of gills of the mayfly nymph, Closon dipterum, A., III, 343.

See also Fox, H. M. Wingfoot Corporation, vulcanisation of rubber, (P.), B., 67, 161, 1380. [Accelerators for vulcanisation of rubber, (P.), B., 67, 374, 592. Transparent films of rubber hydrochloride, (P.), B., 161. Moisture proofing and moistureproofed [cellnlosic] articles, (P.), B., 234. Preparation of stabilised petroleum hydrocarbons, (P.), B., 755. Treating rubber, (P.), B., 1379. Calvert, W. C., and Cramer, H. I., vul-

canisation of rubber, (P.), B., 67.

Wingfoot Corporation, and Clifford, A. M., hydrogen halides, (P.), B., 35. Antioxidant [for rubber], (P.), B., 67. Formaldehyde derivatives of 1mercapto[thiol]thiazolcs, (P.), B., 530. Halogen-substituted thiazoles, (P.), B.,

and Cramer, H. I., organic disulphides, (P.), B., 527. Ditetrahydrofurfurylamines, (P.), B., 880. Accelerators of vulcanisation, (P.), B., 1092.

and Gehman, S. D., wax-like composition, (P.), B., 942.

and Gracia, A. J., dithiazyl disulphides, (P.), B., 23.

and Horst, W. P. ter, pickling inhibitor, (P.), B., 935.

and Kurtz, S. S., jun., rubber deriv-

atives, (P.), B., 1379.
and Lauter, W. M., secondary aromatic amines, (P.), B., 22. Age retarder [for rubber], (P.), B., 950. Rubber composition and method of preserving rubber, (P.), B., 950.

and Lichty, J. G., [accelerators of] vulcanisation of rubber, (P.), B., 1093.

and Park, C. R., pigment composition, (P.), B., 947.

and Sebrell, L. B., mercaptan-amine derivatives, (P.), B., 23. Prevention of deterioration of cotton cord by heat, (P.), B., 1041. Accelerators of vulcanisation, (P.), B., 1092. Treatment of rubber, (P.), B., 1379.

and Smith, C. H., tree dressing, (P.), B., 74. Tree cavity filler, (P.), B.,

and Teppema, J., carbamyl disulphides [vulcanisation accelerators], (P.), B., 22. [Arylene]thiazyl monosulphides, (P.), B., 121. Benzthiazyl disulphides, (P.), B., 880. Accelerators of vulcanisation, (P.), B., 1092. ThiazyI esters of dithiocarbamic acids, (P.), B., 1179.

and Thies, H. R., condensation derivatives of rubber, (P.), B., 474. Moulded products [from thermoplastic materials], (P.), B., 1240.

and Wright, G. M., treatment of rubber, (P.), B., 1379.

Winkel, $A_{\cdot,\cdot}$ and Maas, $H_{\cdot,\cdot}$ determination of potassium with hexanitrodiphenylamine (dipicrylamine), A., I, 45.

and Proske, G., physical methods in chemical laboratories. XXXIII. Polarographic methods in the laboratory, A., I, 152.

See also Beischer, D. Winkelmann, H., volume meter for measuring coal consumption [of furnaces], B., 637. Supervision of gas-producer plant, B., 1154.

Vinkelmann, H. A., and Marbo Products Corp., stabilised butadiene derivatives, (P.), B., 816. Low-viscosity, halogencontaining rubber derivative compositions, (P.), B., 1093. Low-temperature preparation of rubber hydrohalides, (P.), B., 1379.

See also Smithers, V. L.

Winkleman, E. J., vibratory screen and method of screening, (P.), B., 4.

Winkler, E. H., detection of glow emission of single electrons by means of a proportional double amplifying device, A., I. 591.

Winkler, K., [expansion joint for] concrete road surfaces, (P.), B., 350. Winkler, K. C. See De Jong, H. G. B.

Winkley, J. H., Yanowski, L. K., and Hynes, W. A., systematic semi-microprocedure for qualitative analysis of the

commoner cations, A., I, 43.

Winnek, P. S., and Smith, A. H., determination of bromine in biological substances, A., III, 334. Rôle of bromine in nutrition, A., III, 473.

Winning, C. See Standard Oil Development Co.

Winninghoff, W. J., and Gen. Electric Vapor Lamp Co., affixing foreign substances to a vitreous body, (P.), B., 1053.

Winogradsky, H., nitrifying micro-flora of Paris activated sludge, B., 500.

Winogradsky, S., doctrine of pleomorphism in bacteriology, A., III, 396.

Winship, B. W., and Bethlehem Steel Co.,

winship, B. W., and Bethienem Steel Co., phenol extraction, (P.), B., 420.
Winship, W. W., refractory and ceramic uses of fused silica, B., 1204.
Winslow, C. E. A. See Huntington, E.
Winslow, E. H. See Liebhafsky, H. A. Winsor, H. W., intensity and stability of

ferric thiocyanate colour developed in β -methoxyethyl alcohol, A., I, 633.

Winstein, S., and Lucas, H. J., hydration of unsaturated compounds. VI. Rate of hydration of trans-erotonaldehyde; equilibrium between trans-crotonaldehyde and aldol in dilute aqueous solu-

Winston, A. W., magnesium alloys and their structural application, B., 355.

Winston, J. R., harvesting grape fruit to retard stem-end rot, B., 81. Acetylene versus ethylene for degreening citrus fruit, B., 389.

Winter, E. H., colour photography, (P.),

B., 189.

Winter, E. J., growth of Lemna minor, A., III, 365.

Winter, H., effect of small amounts of iron, cobalt, and nickel, etc., on the behaviour of zine towards sulphuric acid, B., 923.

Winter, Heinrich, mineral constituents and composition of the ash from bituminous coal, B., 199. Hydrogenation of lowtemperature tar under various conditions, B., 406. Catalysts and constructional materials for [pressure] hydrogenation [of coal, etc.], B., 862. and Free, G., importance of refraction

for determination and characterisation of constituents of natural and syn-

thetic fuels, B., 865.

Free, G., and Mönnig, H., hydrogenation of low-temperature tar under various conditions, B., 10. Suitability of phenol-free light oils from hydrogenated low-temperature [bituminous] tar as motor fuel, B., 205. Influence of sulphur on hydrogenation of lowtemperaturo tar, B., 1155.

Winter, H. J. See Backer, H. J.

Winter, L. B., breakdown of glycogen by glycogenase of heart-muscle, A., III, 130. Winter, L. L. See Culbertson, J. L.

Winter-Klein, (Mme.) N., relation between the transformation temperature and the variation in the [refractive] index for several glasses, B., 781.

Winterbottom, A. B., polarisation spectrometer for investigation of surface films on metals, A., I, 427. Polarimetric studies of oxide film formation on metals, A., I, 562.

Winterbottom, M., and Minor, J. E., test for tearing-resistance [of paper], B., 770. Winterbottom Book Cloth Co., Ltd., Pilkington, G. E., and Dale, T. L., transparent fabrics, (P.), B., 664.

Vinterfeld, K., Dörle, E., and Rauch, C., improved lime method for determination of morphine in opium and its preparations, B., 1132.

and Hoffmann, Eugen, lupin alkaloids. XII. Behaviour of lupanine towards Grignard reagents. XÎV. Anisylsparteine, A., II, 125, 526.

See also Hoffmann, Eugen. Winterfeld, P. See Schütz, F.

Winterhager, H., influence of annealing atmosphere on surface structure and bending properties of nickel sheet, B.,

Winters, C. E., and Hedrick, J. E., laboratory distillation and vacuum flash unit, В., 628.

Winters, M. See Haynes, E.

Wintershall Akt.-Ges. See Haas, J. Wintersteiner, O., separation of the C_{17} epimers of cestradiol by digitonin, A., II, 243.

and Pfiffner, J. J., adrenal cortex. III. Isolation of two new physiologically inactive compounds, A., III, 38.

Schwenk, E., Hirschmann, H., and Whitman, B., chemical nature of δ-follicular hormone, A., II, 100.

See also Whitman, B.

Winther, C., series of filters for the quartz mercury lamp, A., I, 535. Photographic studies. IV., A., I, 574.
Winther, O. See Orla-Jensen, S.
Winthrop, G. J. See Modell, W.

Winthrop Chemical Co., Inc., and Heineman, P. G., closures for containers for medic-

aments, (P.), B., 729. and Hooper, C. W., water-miscible vitamin preparations containing vitamin-D, (P.), B., 1273.

See also Bockmühl, M., Bonrath, W., Freedman, L., Hooper, C. W., Jensch, H., Linsert, O., Meisenburg, K., and Weissflog, J.

Wintzer, H. See Stamm, H.

Winzer, K., low-temperature carbonisation of coals pretreated with ammonia, B., 1000. See also Peters, K.

Winzor, F. L. See Lugg, J. W. H. Wirberlauer, W. L., and Johns-Manville Corp., coloured fire-resistant fabric, (P.), B., 1198.

Wirtel, $A. F. \Box$ See De Groote, M.Wirth, H. E., and Rigg, G. B., acidity of juice of Desmarestra, A., III, 236.

Wirth, W., distribution of inhaled mercury,

A., III, 66. and Tamm, W., gas analysis apparatus, A., III, 351.

See also Flury, F., and Lindner, J. Wirth, IV. V. See Du Pont de Nemours &

Co., E. I.

Wirtz, K., determination of equilibrium in deuterium exchange reactions in which molecules with numerous atoms are involved, A., I, 81. Velocity of exchange of protons and deuterons between water molecules, A., I, 218. Exchange equilibria of the hydrogen isotopes between water and molecules with numerous atoms, A., I, 516. Overvoltage on hydrogen electrodes, A., I, 567.

See also Jungers, J. C.Wirz, H. See Ruzicka, L., and Verzár, Wisconsin Alumni Research Foundation.

See Hisaw, F. L., and Hurd, L. C. Wiselogle, F. Y. See Bachmann, W. E. Wiseman, H. G. See Shinn, L. A. Wiseman, J. D. H., and Sewell, R. B. S.,

floor of the Arabian Sea, A., I, 432. Wiseman, P. See Dolbear, C. E. Wiseman, P. K. See Dolbear, C. E.

Wishart, A. W. See Reyerson, L. H.
Wishart, G. M. See Blackwood, J. H.
Wishart, H. B. See Moore, H. F.
Wishiewski, F. J., theory of movement of

two electrically charged particles, A., I, 398.

Wiśniowski, Z., composition of flora and chemical properties of pasture soils of Wojewodschaft Krakau, B., 597.

Wissemann, K., new metal mallet, B., 796. Wissgott, L., mass spectrum of positive rays from radium-C', A., I, 160.

Wisshak, F., X-ray spark lines, A., I, 56. Wissler, W. A. See Haynes Stellite Co., and Union Carbide & Carbon Corp.

Wistra " Ofenbau Ges.m.b.H., filtering devices for cleaning liquids, (P.), B., 994.

Wit, J. See Olivier, S. C. J.
Witham, G. S., jun. See Adams, F. W.
Withey, W. H., analysis of magnesium

alloys, B., 51. Withrow, \hat{R} ., and Biebel, J. P., photo-

periodic response of long- and short-day plants to filtered radiation applied as a supplement to daylight, A., III, 235. Sub-irrigation method of supplying nutrient solutions to plants growing under commercial and experimental conditions, B., 376.

Witsch, H. von, influence of heavy-metal salts on geotropic response of plants. II. Effect of copper salts on the plagiogeotropism of Tradescantia shoots and the positive orthogeotropism of seedling roots, A., III, 243.

Witschi, E., sparrow's bill as indicator for the male sex hormone. I. Sensitivity, A., III, 41.

Stanley, A. G., and Riley, G. M., gonadotropic hormones of turkey pituitary, A., III, 438.

Witt, D., prevention of resin formation in benzol recovered by active carbon,

and Schuster, F., corrosion and [town] gas detoxification, B., 746.

Witt, N. F. See Poe, C. F.

Witt, R. K., and Kemp, J. D., heat capacity of ethane from 15° abs. to the b.p. heat of fusion and heat of vaporisation, A., I, 175.

Witte, damage by fumes and the chemical industries, B., 92. Witte, E., colorimeter, (P.), B., 1150.

Witte, H., range of validity of the Hume-Rothery rule, A., I, 297.

See also Laves, F. Witte, R., measurement of fluid flow, B.,

737. Wittekindt, W., action of common salt

on cement, B., 40. Wittenburg, H. H. See Kimball, R. H.

Wittig, G., and Kosack, H., decomposition of hexavinylethane derivatives into

radicals, A., II, 284. and Kröhne, H., accelerated and retarded autoxidation of tetraphenyl-p. xylylene [tetraphenylquinodimethane] action of antioxidants, A., II, 284.

and Wietbrock, R., ααμμ-tetraphenyl-dodecahexaene, A., II, 236.

Wittig, H. W. G. See Bunte, K.

Wittig, R. R. B. See Fulda, W.

Wittka, F., partial hardening of highly unsaturated oils. II. Perilla oil, B., 152. Deacidification of oils with dilute lyes, B., 153. Neutralisation of fats and oils by means of alkali, and filtration of the soaps produced, B., 256. Perfumes as anti-oxidants for oils, B., 586. Antioxygens and fat stabilisers, B., 804.

Wittke, H. See Hopfermann, H. Wittle, E. L. See Marker, R. E.

Wittmann, O., and Wohlfahrt, R., extraction of chromium from electroplating waste liquors containing chromates, B., 923. Wittner, F. See Hönigschmid, O.

Wittrock, O., experimental study of molecular theory of lubrication, B., 1299. Wittum, M. See Raub, E.

Witty, G., cement composition, (P.), B., 676. Building brick, (P.), B., 677. Building tile, (P.), B., 787. Slag cement, (P.), B., 787. Manufacture of insulating composition, (P.), B., 1145.

and Construction Products Corp., refractory articles, (P.), B., 673.

Witzel, E., and Young Radiator Co., distributing head for evaporators, (P.), B., 631.

Wiadasch, A., proportion of albumin to globulin in serum of healthy animals, A., III, 2.

Wo-Bar Manufacturing Co., Ltd. See Whiteley, E., jun.

Wodstrup-Nielsen, (Miss) I. See Hagedorn, H. C.

Wöger, K. See Zimmermann, W.

Wögerbauer, H., stable dry leavenous agent for baking purposes, (P.), B.,

Wöhlbier, W., and Windheuser, C., digestibility of "amide slices," B., 1403.

Wöhlisch, E., and Neugschwender, A., measurement of depolarisation of Tyndall light with solutions of proteins, particularly fibrinogen, A., III, 412.

See also Meissner, I., and Weitnauer, H.

Woelflin, R. Sec Fauré-Fremiet, E. Woelflin, W., and Petroleum Rectifying Co. of California, separation of [oil] emulsions, (P.), B., 1163.

Wöllpert, K. See Holtz, P.

Woenckhaus, E., action of Röntgen rays. IV., A., III, 21.

Wörner, H. See Neber, P. W.

Wogrinz, A., determination of gold by Chiddy's method, A., I, 265. Determination of silver by the Gay Lussac method, A., I, 326. Technique of galvanising and the surface protection of metal articles, B., 570.

Wohl, K., theory of osmotic pressure, and Ulmann's method of measurement, A., 1,459. Theory of assimilation. I. Theory of assimilation unit. II. Franck and Herzfeld's assimilation theory, A., III, 500.

Wohl, M. G., and Brust, R. W., high blood-urea-nitrogen not due to chronic

nephritis, A., III, 4.

Wohlenberg, W. J., and Mullikin, H. F., computing heat absorption in boiler furnaces, B., 627.

Mullikin, H. F., Armacost, W. H., and Gordon, C. W., heat absorption in boiler furnaces, B., 627.

Wohler, L. A., physical testing procedure for [rubber] latex stocks, B., 472.

Wohlfahrt, R. See Wittmann, O.

Wohlgemuth, K. See Ziegler, K.

Woitysiak, A., influence of fertilisers on chemical composition of the yellow

lupin, B., 1252. Wojack, G. See Simonis, H.

Wojciechowski, J. See Niklewski, B. Wojciechowski, M., ebulliometric and tonometric measurements on normal aliphatic hydrocarbons, A., I, 21. B.p. of ethyl ether and its relation to pressure, A., I, 21. Ebulliometric and tonometric study of normal aliphatic alcohols, A., I, 122. Simplified procedure for determining normal b.p. by the comparative method [of Swientosławski], A., I, 151. Determination of certain physico-chemical constants of benzene, A., I, 174. and Smith, E. R., b.p. and density of

acetates of n-alcohols, A., I, 354. See also Bekkedahl, N., and Smith, E. R.

Wójciński, L. See Suszko, J.

Wojtowicz, J. See Malachowski, R. Woke, P. A. See Babers, F. H.

Woker, G., and Antener, I., reactions of ascorbic acid, A., II, 367. Quinone reactions, A., II, 530. Enzymic action of ascorbic acid (vitamin-C), A., III, 155.

Wokes, F., isotonic solutions for injection, A., III, 4.

Wol, A. E. See Slavinski, M. P. Wolbach, S. B. See Shoal, A. T. Woldenberg, S. C., sulphur (colloidal) therapy in treatment of arthritis, A., 111, 459.

Wolf, A. See Spengler, O.

Wolf, C., and Treiber, H., running tests on short-time pasteurisers, B., 280.

Wolf, E.J., treatment of organic [animal or vegetable] cellular materials, (P.), B., 186. Wolf, F., anomalous charge phenomena on ionic collisions, with dissonance, A., I, 3. Anomalous charging phenomena for very slow positive rays, A., I, 56. Passage of heavy and light hydrogen ions through argon, A., I, 159. Discharge of alkali ions through various gases, A., I, 209. Ionic impact at strict resonance, A., I, 274. Limits of validity of the resonance principle of charge transfer, A., I, 542.

Wolf, F. A. See Darkis, F. R. Wolf, F. F., combined treatment of waste from pyrites flotation to obtain sulphur, sulphurous gas, and briquettes for the blast-furnace process by the Unichim method, B., 905.

Wolf, Georges. See Hackspill, L.

Wolf, Gotthardt, [camera for] colour kinematography, (P.), B., 845. Processing of film material coated with emulsion on both sides, (P.), B., 984.

Wolf, H. C., and Wolf Eng. Co., varying bitumen content of rock asphalt, (P.),

B., 208.

Wolf, H. J., and Tschesche, R., anemia produced by milk diets in young, growing rats in testing activity of liver preparations, A., III, 378.

See also Tschesche, R.

Wolf, K. L., association, heat of mixing, and miscibility gaps, A., I, 138.

and Frahm, H., calorimeter for measure-ments with liquids of high vapour pressure, A., I, 330.

Frahm, H., and Harms, H., molecular

state of liquids, A., I, 513.

Wolf, L., potentiometry using several electrode pairs connected in series, A., I, 100. Electrolysis vessel for quantitative electrolytic analysis, A., I, 379.

Wolf, P. M., and Riehl, N., viewing of [photographic] films and plates, B., 1137. Wolf, W. See Fricke, R.

Wolf Engineering Co., Inc. See Wolf,

H.C.Wolfe, C. W., [crystallographic] re-orient-

ation of römerite, A., I, 431.

Wolfe, J. M., comparative action of injections of cestrin and a combination of æstrin and anterior pituitary-like substance on the anterior pituitary, A. III, 361.

and Hamilton, J. B., response of anterior pituitary of immature castrated rat to testosterone and related compounds, A., III, 321.

Wolfe, R. N., and Wilkins, T. R., validity of the photographic reciprocity law for α-rays, A., I, 331.

See also Sheppard, S. E.

Wolfenden, J. H. See Small, P. A., and Walton, H. F.

Wolff, A. See Butenandt, A.

Wolff, Emilienne. See Wolff, Etienne.

Wolff, Etienne, and Wolff, Emilienne, action of various substances of the androsterone group on the genital organs of the chicken embryo, A., III, 151.

Wolff, G., necessity of investigating effect of antiseptics in human diet, B., 494. Changes in composition [of foods] due to industrial treatment, especially the effect of refining on lipin content, B., 494.

Wolff, H. See Gen. Electric Co.

Wolff, Hans, determination of degree of brushability of a paint, B., 369. Film formation and metal protection by varnish, B., 590.

and Hesse, H., specific properties of solvents, B., 155.

and Zeidler, G., use of heavy spar in the paint and varnish industries. I. II. Effects of heavy spar in lithopone, B., 369, 589. Rational use of oil in manufacture of oil paints, B., 589. Wetting process of pigment-oil mixtures, B., 1086.

Wolff, H. G., and Gantt, W. H., caffeine-sodium benzoate, sodium isoamylethylbarbiturate, sodium bromide, and chloral hydrate effect on the highest integrative functions, A., III, 136.

Wolff, I., polarisation capacity and electrode condition, A., I, 188.

Wolff, J. E., hastingsite in theralite from the Crazy Mountains, Montana, A., I, 431.

Wolff, K., mode of [pharmacological] action of arsenic trihydride, A., III, 29. See also Havemann, R., and Tetsch, C.

Wolff, L. K., position of vitamins in the series of food constituents, A., III, 280. See also Eekelen, M. van.

Wolff, R., and Bourquard, A., distribution of magnesium in the tissues of the eye, A., III, 118.

Rangier, M., and Bourquard, A., variations in blood- and muscle-magnesium following repeated muscular contraction, A., III, 93.

Wolff, R. R. See Goldschmidt, Stefan.

Wolff & Co., Komm.-Ges. auf Aktien, cellulose esters and products of same, (P.), B., 27. Artificial casings or tubes, (P.), B., 228. Increasing slip in structureless foils composed of highly polymeric materials, (P.), B., 370.

Wolfke, M., secondary electrons of the

neutrino, A., I, 213.

Wolfrom, M. L., and Georges, L. W., study of cellulose hydrolysis [by hydrochloric acid] by means of ethyl mercaptan, A., II, 137. 2:3:6-Trimethylglucose diethyl mercaptal; its use in preparation of 2:3:6-trimethylglucose, A., II, 230. and Husted, D. R., $\beta \rightarrow a$ conversion of

fully acetylated sugars by alkali, A.,

II, 136.

and Tanghe, L. J., aldehydo-derivatives of dibenzylideneglucose, A., II, 444.

Wolkenstein, M., and Syrkin, J. K., Raman spectra of oxonium compounds, A., I, 219.

Wollan, E. O., Debye-Waller temperature factor for anisotropic crystals, A., I,

and Harvey, G. G., effect of temperature on intensity of reflexion of X-rays from zinc crystals, A., I, 446.

Wollaston, I. B., gas producers, (P.), B.,

Wollman, E., Giroud, A., and Ratsimamanga, R., synthesis of vitamin-C by Orthoptera (Blattella germanica) grown aseptically, A., III, 154. See also Basset, J.

Wollner, H. J. See Gen. Chem. Co. Woloszczuk, A. See Tucholski, T.

Woloszyn, M. Sce Bezssonoff, N.
Woloszyn, V. Sce Bezssonoff, N.
Wolpert, O. See under Hessenmüller & Wolpert.

Wolsehwiansky, B., washing of carbonat-ation filter-press cakes with limed water [in beet-sugar factories], B., 75. Preliming process [for beet-sugar juices], B., 1109.

Wolsky, A. A., production of local depressions in development of Drosophila pupæ, A., III, 348. Wolstadt, R. See Schnlek, E.

Wolstenholm, G. E., choice of steels for particular purposes, B., 245. Wolter, A. See Fries, K., and Ohle, Heinz.

Wolter, H., optics of thin metal films, A., I, 402, 555.

Woltmann, F. See Jenckel, E. Womack, M., and Rose, W. C., relation of leucine, isoleucine, and norleucine to growth, A., III, 17. Wonder, D. H. See Evans, H. M.

Woo, Q. S. See Hilpert, R. S.
Woo, S. O., and Chu, T. C., absorption
spectra and dissociation energies of
n- and iso-thiocyanates, A., I, 393. Absorption spectrum of diacetylene in the near ultra-violet. II., A., I, 597.

and Liu, T. K., preparation of zinc and cadmium cyanides, A., I, 92. New absorption system of cyanogen gas in the near ultra-violet; system I., A., I, 215. New absorption system of cyanogen gas in the near ultra-violet system, A., I, 392. Absorption spectra and dissociation energies of cyanic acid and some isocyanates, A., I, 393.

Woo, T. T. See Wang, Chen.

Woo, Y. H., and Sun, C. P., X-ray scattering coefficients of gases, A., I, 105.

Wood, A. R., determination of iron in sands and glasses, B., 136. Powder method of comparing solubilities of glasses, B., 137. Determination of alkali [in glass] by the autoclave method, B., 138.

See also Pilkington Bros. Wood, C. E. See Harris, T. L. Wood, E. L., and Hines, H. M., effect of vitamin-E-deficient and muscular dystrophy-producing diet on metabolism of guinea-pigs, A., III, 441. Wood, F. D. See Kofoid, C. A.

Wood, F. S., and Wood, F. W., safety

paper, (P.), B., 230. Wood, F. W. See Wood, F. S.

Wood, G., rotary screening drums, (P.), B., 1288.

Wood, H. G., Anderson, A. A., and Workman, C. H., growth factors for propionic and lactic acid bacteria, A., III, 319.

Erb, C., and Werkman, C. H., aërobic dissimilation of lactic acid by propionic acid bacteria, A., III, 357.

Stone, R. W., and Werkman, C. H., intermediate metabolism of propionic acid bacteria, A., III, 182.

Tatum, E. L., and Peterson, W. H., growth factors for bacteria. Acidic ether-soluble factor essential for growth of propionic acid bacteria, A., III, 316.

See also Erb, C., Tatum, E. L., and Werkman, C. H.

Wood, J. E. See Superheater Co.
Wood, J. H., and Bost, R. W., sulphur
studies. XI. Sulphur derivatives of benzaldehyde. XII. Thioaldehydes in the naphthalene and anthracene series, A., II, 342, 456.

Wood, J. W., Parrish, E., and Eastwood, A. H., corrosion from products of combustion of [town's] gas. IV. Tube experiments, B., 9.

Wood, L. A. See Bekkedahl, N.
Wood, L. J. See Zvanut, F. J.
Wood, N. See Gordon, J.
Wood, P. M., clinical use of cyclopropane and tribromoethanol in amylene hydrate, A., III, 477.

Wood, R. C., manuring bananas, B., 600. Village waste, B., 624

Wood, R. E. See Theophilus, D. R. Wood, R. T. See Jeffries, Z.

Wood, R. W., Raman spectra of deuteroparaldehyde and paraldehyde, A., I, 345. Recent improvements in diffraction gratings and replicas, A., I, 634. Optical and physical effects of high explosives, B., 295.

Wood, S. E., deviations of carbon tetrachloride and silicon tetrachloride solutions from Raoult's law, A., I, 507.

Wood, W. A., lattice dimensions of electroplated and normal chromium, A., I, 350. Transition from hexagonal to cubic electro-deposited chromium, B., 1221.

See also Gough, H.

Wood, W. S. See Laporte, Ltd., B.

Woodall-Duckham (1920), Ltd., and Clark, A. N., construction of retorts or chambers for carbonisation of coal, (P.), B., 1299.

and Finlayson, T. C., vertical carbonis-

ing retorts, (P.), B., 207. and Jackson, G. J., under-fired coke ovens, (P.), B., 1008.

and Kent, A. T., [vertical] carbonising retorts or furnaces, (P.), B., 317. Charging of vertical carbonising retorts, (P.), B., 317.

Kent, A. T., and Carey, H. H., mixture of coal gas and water-gas, (P.), B., 318.

Woodard, H. Q., decomposition of iodides by X-rays and γ -rays, A., I, 38.

Woodbridge, R. G. See Du Pont de Nemours & Co., E. I.

Woodbury, C. A. See Du Pont de Nemours

& Co., E. I. Woodcock, J. W. See Hudson, A. W., and Riddet, W.

Woodgate, F. E., [sectional] floor covering, (P.), B., 1058.
Woodhouse, J. C. See Du Pont de Nemours

& Co., E. I., and Lamb, A. B.
Woodliff, E., American [foundry] sand
testing technique, B., 1217. See also Dietert, H. W.

Woodman, H. E., grass drying, B., 837. and Evans, R. E., composition and

digestibility, when fed to pigs, of three grades of meat meal of widely differing fat content, B., 1129. Evans, R. E., and Eden, A., sheep

nutrition. I. Measurements of appetites of sheep on typical winter rations: critical study of sheep-feeding methods. II. Determination of amounts of grass consumed by sheep on pasturage of varying quality, B., 617.

Woodman, R. M., pure silica sand as basis for phosphate-deficiency tests in lettuce, B., 168. Weedkillers, B., 481.

Woodroofe, E. G. See Roberts, J. E. Woodruff, C. M. See Baver, L. D. Woodruff, J. C. See Sturken, O.

Woods, D. D., and Clifton, C. E., metabolism of the strict anaërobes (Clostridium). VI. Hydrogen production and amino-acid utilisation by C. tetanomorphum, A., III, 487.

Woods, E., Atkeson, F. W., Wellhousen, H., and Johnson, R. F., vitamin-A activity of third-cutting alfalfa [lucerne] hay as affected by curing, B., 1128.

Woods, G. M., voltolisation process for production of premium motor oils, B., 204. Drying oil from cracked gasoline, B., 750. Premier Diesel fuels, B., 869. Woods, M. A. See Williams, R. J.

Woods, W. K., alignment chart for interpreting Orsat analyses of fluc gas, B., 738.

Woodside, G. L. See Robinson, T. W. Woodward, E. R., ammonia in petroleum refining, B., 1004.

Woodward, (Miss) G. E., and Schroeder,

E. F., reaction of cysteine with acetone; titration of cysteine by the acetone-hydrochloric acid method of Linderstrom-Lang, A., II, 472. See also Schroeder, E. F.

Woodward, I. See Robertson, J. M. Woodward, J. C. See Watson, C. J.

Woodward, R. B. See Emerson, R. L., and Prescott, S. C.

Woodward, R. H., variation of cosmic-ray showers with altitude from counter

measurements, A., I, 546. and Street, J. C., absorption of cosmicray electrons at 10,600 ft. and at sea

level, A., I, 491.
Woodward, T. E., quantities of grass that dairy cows will graze, B., 1128.

and Shepherd, J. B., chopping alfalfa [lucerne] hay at time of storage, B., Ì128.

Woodworth, C. M., and Bonnett, O. T., new wheats may give higher-quality bakery products, B., 1397.

Woog, P., molecular manifestations [in lubrication], B., 206.

Woolcock, J. W. See Imperial Chem.

Industries.

Wooldridge, D. E. See Jenkins, F. A. Wooldridge, W. R., and Glass, V., variability in activity of bacterial enzymes. II. Factors associated with viability and growth, A., III, 225.

Wooles, R. L., and Heisey & Co., A. H., etched glassware, (P.), B., 1206.

Woolf, D. O., cone method for determining [water] absorption by sand, B., 675.

Woolf, J. A. See Leaver, E. S. Woolf, S. S., chemical kinetics of interaction of alkyl iodides with sodium

eugenoxide in ethyl alcohol, A., I, 468.

Wooller, A., physicochemical aspects of iron-blues, B., 467.

Woollett, G. H., Davis, F. M., Jones, C. N., and Neill, (Miss) M., oxidation of substituted phenols; effect of iodine in oand p-positions, A., II, 287.

Woolley, D. W., extractor for monoamino-acids, A., II, 477.

and Peterson, W. H., chemistry of mould tissue. XII. Isolation of arginine, histidine, and lysine from Aspergillus sydowi, A., III, 223.

See also Elvehjem, C. A.

Woolsey, G., Boyle temperature and a general equation of state, A., I, 22. Critical constants of the inert gases and of hydrogen compounds having the same number of electrons per molecule, A., I, 506.

Woolvin, C. S. See Haworth, W. N., and

Imperial Chem. Industries.

Wooster, C. B., heats of dissociation of hexa-arylethanes, A., I, 31. Structure of metal ketyls. V. Conductance function, A., I, 189.

and Godfrey, K. L., mechanism of reduction of unsaturated compounds with alkali metals and water, A., II,

182.

Wooster, W. A., crystal structure of gypsum, CaSO₄,2H₂O, A., I, 17. Thermal conductivity in relation to crystal structure, A., I, 294,

Wooten, L. A. See Clarke, B. L. Work, L. T. See Ligorio, C. Work, T. S. See Barger, G., and Todd, A. R.

Working, E. B., chemistry [and physiology] of phosphatides and their utilisation in industry, B., 81.

World Bestos Corporation. See Nanfeldt,

Worley, F. P., and Brooker, S. G., composition of ancient buried kauri wood, B., 349.

Wormald, H., sooty-blotch disease of apples and plums, B., 824. Bacterial canker in plum and cherry trees, B., 825.

and Painter, A. C., brown rot of plums in cold storage, B., 836.

Wormwell, F. See Bengough, G. D. Worner, H. K. See Greenwood, J. N.

Worrall, D. E., action of hydroxylamine and hydrazine on acetylenic thioamides, A., II, 307. Acetylenic thioamides, A., II, 433.

Worsley, R. R. Le G., rotenone. I. Determination of rotenone. II. Evaluation of plants containing rotenone, B., 286. Insecticidal properties of East African plants. II. Mundulea suberosa, Benth, B., 378. Household sprays, B., 624. Evaluation of Derris and Mundulea, B., 1131.

Worthington, J. T., and Petroleum Rectifying Co. of California, electric dehydrator [for oil emulsions], (P.), B., 19. Electric dehydration [of oil emulsions], (P.), B., 19.

Worthington Pump & Machinery Corporation. See Hiller, N. H.

Worthley, H. N. See Frear, D. E. H. Worthley, K. See Daland, G. A. Wortis, J. See Himwich, H. E.

Wortis, S. B., respiratory metabolism of excised brain tissue. II. Effects of drugs on brain oxidations, A., III, 126. Wortz, C. G. See Du Pont de Nemours & Co., E. I.

otherspoon, R., and Derris, Inc., insecticidal solution, (P.), B., 1255. Wotherspoon, Water-soluble and water-miscible insecticides, (P.), B., 1255.

Wouters, J., De Hemptinne, M., and Capron, P., molecular structure of silieobromoform, A., I, 227.

See also De Hemptinne, M.

Wouthuysen, S. A. See Rutgers, A. J. Wrana, J., welding wires of chromiumnickel and high-temperature-resistant alloys with condenser discharge, B., 575.

Wrapson, G. See Simpkin, N. Wray, R. I., and Van Vorst, A. R., permeability of lacquer films to moisture, B., 63. Wrede, F., 2-methyl-4-n-amylpyrrole, A.,

II, 259. Narcotoline, a new alkaloid of the poppy (Papaver somniferum), A., II, 265. Wrede, K., and Kratz, B., determination of

alcohol in blood, A., III, 372. and Scriba, H., determination of alcohol in blood (modification of Liebesny's method), A., III, 248.

Wren, H., and Crawford, John, optically active alkylsuccinic acids. I. Resolution of r-ethylsuccinic acid into its

optical antipodes, A., II, 134. and Haller, J. W. E., optically active alkylsuccinic acids. II. Stereochemical configuration of the symmetrical diethylsuccinic acids, A., II, 134.

Wrigge, F. W. See Geilmann, W., and Mathiesen, I.

Wright, A., twenty-five years of chemical engineering progress in filtration, B., 195. Filtration of solid-bearing liquids, (P.), B., 305.

Wright, C. C., and Gauger, A. W., progress report on coal hydrogenation, B., 638. Wright, C. H. See Morris, D. D.

Wright, D. A., structure and resistance of thin metal films, A., I, 504.

Wright, E. R., and Mellon, M. G., phosphotungstate method for vanadium [determination]; spectrophometric study, A., I, 427. Peroxide method for [de-termination of] vanadium; spectrophotometric study, A., 533.

Wright, F. E., identification of rocks by reflected light, A., I, 384.

Wright, G. F., organometallic compounds

of styrene, A., II, 222.
and Hibbert, H., lignin and related compounds. XXVI. Properties of spruce lignin extracted with formic acid, A., II, 110.

See also Bell, A., and White, E. V. Wright, G. M. See Wingfoot Corp. Wright, G. P. See Bolton, C.

Wright, H. See Shardlow & Co., A. Wright, H. E., and Central Paper Co., mulch fertiliser paper, (P.), B., 715.

Wright, H. L., determination of reducing sugars by Main's pot method in beetfactory juices and molasses, B., 1114.

Wright, H. N., comparative efficiency of common flavouring agents, B., 729.

Wright, I. S., Lilienfeld, A., and MacLenathen, E., determination of vitamin-C saturation, A., III, 406.

See also Lilienfeld, A. Wright, J. G. E. Sec Gen. Electric Co. Wright, J. M. See Linstead, R. P.

Wright, K. E., effects of phosphorus and lime in reducing aluminium toxicity in acid soils, B., 600.

Wright, (Miss) M. D. Sec Baker, (Miss) A.Z.

Wright, N., infra-red absorption spectra of the stereo-isomerides of cystine, A., II, 488.

and Lee, W. C., Raman effect as a method of analysis of amino-acid solutions, A., I, 282.

See also Lord, R. C., jun.

Wright, N. C. See Blackwood, J. H., and Morris, S.

Wright, N. L. See Moran, T. Wright, O. E. See Daniels, A. L. Wright, P. A. See Holm, G. E. Wright, S., genetics of abnormal growth in

guinea-pigs, A., III, 125. See also Schweitzer, A.

Wright, W. A. See Warburton, H.

Wrighton, H. See Smiles, J. Wrighton, W. J., and Jarrett, T. C., radiography of composite gold plate, B.,

571. Wrineh, D. M., structure of insulin, A., I, 604. Nature of the linkings in proteins, A., II, 357. Pattern of proteins, A., II, 394. Molecular structure of chromosomes, A., III, 253. Cyclol theory and the "globular" proteins, A., II, 475; III, 296. Structure of

insulin, A., III, 362. See also Astbury, W. T., and Langmuir, I.

Wrobel, A., derivatives of Py:Py'-tetra-hydrodiquinolyl, A., II, 77. Derivatives of 3:3'-diketo-5:5'-dimethyldihydro-2:2'-

di-indolyl, A., II, 77. Wronski, J. P. See Bull, H. B.

Wrzesinska. (Miss) A., influence of concentration on distribution of intensity in photoluminescence spectrum of glycerol solutions of trypaflavine, A., I, 346.

Wu, C. See Chang, Ta Y.
Wu, C. H., strains of Bacillus radicicola from root nodules of soya bean, A., III,

Wu, C. S. See Sah, P. P. T.

Wu, H., and Chou, C. Y., colorimetric determination of sex hormones in human urine, A., III, 320. Apparatus for extraction of lipins from liquids with an immiscible solvent, A., III,

See also Chou, C. Y., Chow, B. F., Lee, K., and Liu, S. C.
Wu, S. W. Sec Liang, T. Y.
Wu, T. Y., estimation of electron affinities

of He, Li, and F, A., I, 6. Fundamental frequencies of CH2, CHD, CD2, CHCl, CDCl, and cis- and trans-C,H,D, and -CaHaCla, A., I, 397. Assignment of the $\delta_{\pi s}$, $v_{2\pi s}$ frequencies in the ethylene molecule, A., I, 443.

and Shen, S. T., force constants and fundamental vibrations of diacetylene, A., I, 170.

See also Shen, S. T.

Wüldicke, E. See Kunz, W. Wülfert, K. See Kraff-Ström, H.

Wülfing, J. A., obtaining therapeutically valuable metal compounds of keratinic acids, (P.), B., 188. Metal compounds of water-soluble keratin splitting [hydro-

lysis] products, (P.), B., 393.
Wülfing, R. von. See under Wülfing, J. A.
Wuensch, C. E., separation of heterogeneous mixtures [of comminuted solids], (P.), B., 98. [Wet] classifier [in closed circuit with mill], (P.), B., 511. Ore dressing, (P.), B., 1224.

Wurth, K., protective coating of chemical plant, B., 467. Rusting under [paint films], B., 944.

Wuertz, A. J. See Du Pont de Nemours & Co., E. I.

Würzner, $K_{\cdot,i}$ [determination of time of setting of cement], B., 674.

Wuhrmann, K., and Meyer, Madeleine, orientation of cellulose and "primary" substance in the growing Avena coleoptile, A., III, 445. Wuis, P. J. See Nauta, W. T.

Wulf, H., oil-free, acid- and heat-resistant protective coatings on a basis of Buna

[synthetic rubber], B., 1087.
Wulf, O. R., Liddel, U., and Hendricks,
S. B., effect of ortho-substitution on absorption of the OH group of phenol in the infra-red, A., I, 9.

Wulff, H.J. See Negelein, E.

Wulff, P., increasing accuracy of measurement and control, B., 987.

and Schwindt, H., dielectric loss measurement as a physico-chemical method of investigating liquid non-conductors

and half-conductors, B., 254.
Wulff, R. G., and Wulff Process Co., acetylene gas, (P.), B., 318.

Wulff Process Co. See Wulff, R. G.

Wulkan, H. See Voss, W.

Wunderlich, H. See Benrath, A.

Wunderly, C., nephelometric micro-determinations of antitryptic activity, A., III, 32.

Wunderly, H. L., and Sowa, F. J., condensation of acetic acid and cyclohexene in presence of boron fluoride, A., II,

Wurmser, R., and Filitti-Wurmser, S., rôle of proteoflavin in the electrochemical equilibrium of cells, A., III, 431.

Wurst, H. See Scheil, E.

Wurster, O. H., recovery of crude glycerin, B., 58.

Wurz, O., sulphite pumps for parchmentising purposes, B., 425. Pectins in sulphite pulp, B., 769. Wurzbacher, A. F. See Connolly, G. C.

Wurzner, K., hardening process of cement,

B., 554. Wurzschmitt, B., and Kerckow, F. W., determination of permeability of synthetic materials towards water vapour,

A., I, 268. Wustrow, IV., analysis of gas mixtures by means of rectifying distillation, A., I, 380.

Wuyts, H., rings containing nitrogen and

sulphur, A., II, 264. and Deshommes, W., iodo-derivatives of thiodiazolines of formaldehyde, A., II,

and Lacourt, (Mlle.) A., formation of dihydrazidines and dihydrotetrazines from dithiocarbonic acids, A., II, 168. Wyart, J., crystal lattice and twins in

leucite, A., I, 17.

Wyatt, F. A., and Leahey, A., activated carbon as a fertiliser, B., 1249.

Wyckoff, R. D., and Botset, H. G., flow of gas-liquid mixtures through unconsolidated sands, B., 854.

See also Muskat, M.

Wyckoff, R. W. G., ultracentrifugal purification and study of macromolecular proteins, A., II, 475. Ultracentrifugal concentration of pneumococcic antibodies, A., III, 6. Preparation of proteins by ultracentrifuging, A., III, 253. Preparation of virus-proteins by ultracentrifuging, A., III, 276. Isolation of high-molecular proteins by the ultracentrifuge, A., III, 399. Ultracentrifugal concentration of a homogeneous heavy component from tissues diseased with equine encephalomyelitis, A., III, 419. Sedimentation constant of ovoverdin, A., III, 457. Molecular sedimentation constants of tobacco-mosaie virus-proteins tracted from plants at intervals after

inoculation, A., III, 489. and Beard, J. W., p_H stability of Shope papilloma virus and purified papilloma

virus protein, A., III, 435.

Biscoe, J., and Stanley, W. M., ultracentrifugal analysis of crystalline virus proteins isolated from plants diseased with different strains of tobaccomosaie virus, A., III, 100.

and Corey, R. B., X-ray diffraction patterns of crystalline tobacco mosaic proteins, A., III, 52. Ultracentrifugal crystallisation of tobacco mosaic

virus protein, A., III, 71. and Lagsdin, J. B., air-driven ultra-

centrifuge for molecular sedimentation, A., I, 268.

See also Beard, J. W., Loring, H. S., and Stanley, W. M.

Wyeth & Bro., Inc., J. See Bird, J. O. Wygal, C. D., and Inland Lime & Stone Co., decalcification of magnesian dolomites, (P.), B., 437.

Wyk, A. J. A. van der, viscosity of binary mixtures, A., I, 72.

See also Boissonnas, C, G.

Wyler, J. A., and Trojan Powder Co., purification of trinitrotoluene, (P.), B., 296. Nitration of sugars, (P.), B., 503. Nitration of sugars and their glucosides, (P.), B., 503. Tetranitromethane, (P.), B., 1170.

Wyler, M. See Imperial Chem. Industries. Wylee, H. B. See Schmidt, E. G., and

Schmulovitz, M. J.
Wyman, J., jun. See German, B.
Wynd, F. L., respiration of B. coli, A., 111,

317.

Wyndham, R. A. See Lemberg, R. Wynn, C. S. See Rhodes, F. H. Wynn, W. See Bachmann, G., and Haldi, J.

Wynne-Roberts, R. I., grinding characteristics of various woods, B., 424. Artificial stones for different kinds of groundwood pulp, B., 768. Riffling of groundwood pulp, B., 894.

Wynne-Williams, A. I., production of nickel sheets by [electro-]deposition, B.,

Yabroff, D. L. See Bataafsche Petroleum Maats., and Shell Development Co. Yackel, E. C. See Eastman Kodak Co. Yadoff, O., electrical and mechanical ageing of copper conductors under the prolonged action of an electric current, B., 1064.

Yaeckel, M. P. See Kennard, T. G. Yager, J. G., tantalum: occurrence, properties, and uses, B., 450.

Yager, W. A., dielectric behaviour of camphor, A., I, 12. Distribution of relaxation times in typical dielectrics, B., 936.

Yagi, S., luminous flames. I. Absorption spectra of soot layers. II. Absorption spectra of luminous flames, A., I, 279. and Kawai, Seiroku, luminous flames.

III. Properties of luminous flame and Kirchhoff's law, B., 752.

Yagishita, M., iodine in blood of diabetics, A., III, 300.

Yaglon, C. P., physical and physiological principles of air conditioning, B., 846. and Carrier Eng. Corp., controlling the ionic content of air, (P.), B., 1282.

Yagoda, H., applications of confined spot tests in analytical chemistry, A., I, 199. Yajnik, N. A., Kapur, P. L., and Malhotra, R. L., adsorption of precipitates. I. Adsorption of precipitates of ferric, aluminium, and chromic hydroxides, A.,

I. 515. Yakowitz, M. L., and Jorgensen, P. S., refractive index of strontium nitrate,

A., I, 351.

Yakushiji, E., absorption bands of oxy-cytochrome-C, A., III, 457. Poly-phenolases, A., III, 481. Inhibition of catalase action by polyphenols and aromatic polyamines, A., III, 481.

and Mori, \hat{T} , cytochrome-b; isolation, properties, and rôle in the reaction mechanism of cellular respiration, A., III, 480.

See also Mori, T.

Yakusizi, N., distribution of iron and zinc in plasma, protoplasm, and nucleus of different kinds of pus, and the biological significance of these metals, A., III, 54. Distribution of iron and zinc in blood plasma, the protoplasm of blood corpuscles and their nuclei, in different animals, A., III, 54. Mechanism of liberation of the nucleus and behaviour of a suspension of isolated nuclei, A., III, 195.

Yale, M. W., high-temperature, shortperiod [milk] pasteurisation in the United States, B., 610.

Sec also Chilson, W. H. Yamada, A. Sec Nishida, K.

Yamada, H., effects of nicotine, conline, piperidine, and sparteine on growth and morphological picture of in vitro cultures of fibroblast, A., III, 27.

Yamada, Takao. See Kondo, K. Yamada, Teikichi, decomposition of tetralin peroxide. L Thermal decomposition. II. Effect of quinol. III. Effect of antioxidants. IV. Effect of sulphur and sulphur compounds, A., I, 316: II, 56.

Yamafuji, K., catalase activation in living cells. II.-IV., A., III, 30, 220, 311. Comparison of catalase activity and vitality of silkworm eggs, A., III, 139.

and Goto, S., heredity in amylase activity, A., III, 142. Catalase in the F_1 generation, A., III, 311. Resistance of silkworm eggs to heat, A., III, 474. Goto, S., and Iio, N., catalase of the blood

of silkworms bred under unfavourable conditions, A., III, 480. Yamagata, S., and Nagahisa, M., alcohol

dehydrogenase of turnips, A., III, 352. See also Tazawa, Y.

Yamagishi, G., enzymes of grain. III. relation between action of the starchliquefying enzyme of rice and $p_{\rm H}$, A., III, 269.

Yamagishi, T. See Odake, S. Yamaguchi, M., nickel alloys for dairy equipment, B., 1220.

See also Kita, G., and Suehiro, S. Yamaguchi, T., factors in the Mullen tester influencing bursting strength of paper, B., 657.

Tasaburo, oxidation of a Yamaguchi, crystal surface studied by cathode-ray reflexion, A., I, 401.

Yamaguchi, Tsuneta. See Oguri, S.

Yamagutchi, S., physiology of respiration of bacteria. III. Oxidation of various phenols and phenylene-diamines by Bacillus pyocyaneus, A., III, 487.

Yamaguti, K. See Asahina, Y.

Yamaha, G., and Suematsu, S., plant nucleoli, A., III, 80.

Yamamoto, H., equations for the Dirac electron in general relativity, A., I, 215.

Yamamoto, I., influence of various sub-stances on lactic acid dehydrogenase in heart muscle, A., III, 219.

See also Kobayashi, K.

Yamamoto, Kenichi, and Abe, M., colorimetry with the photo-electric cell. II., A., I, 49.

Ishikawa, H., and Machida, K., application of anhydrous aluminium chloride in the petroleum industry. I. Preparation of anhydrous aluminium chloride from alumina, carbon, and chlorine. II. Preparation of anhydrous aluminium chloride from the spent liquor of activated clay, B., 34.

See also Kobayashi, K. Yamamoto, Kenkichi, influence of alumin-

ium sulphate on Cyperus malaccensis, B., 825.

Yamamoto, R., and Ito, K., essential oil of

black tea. III., A., III, 503. and Oshima, Y., colouring matter of Hibiscus sabdariffa, L. (hiviscin). II., A., II, 71.

Yamamoto, Y., passivity of iron and steel in nitric acid solution. XI.—XXI., A., 1, 84, 141, 188, 311, 415, 468, 521, 568,

Yamamura, Y. See Nakaidzumi, M.

Yamanaka, N., effects of stress on Gerlach's e.m.f. in nickel, iron, and nickeliron alloys, A., I, 451. Gerlach's thermomagnetic e.m.f. in nickel, iron, and nickel-iron alloys, A., I, 451.

Yamane, S., influence of addenda on setting of Portland cement. I. Formation of calcium sulphoaluminosilicate on addition of calcium sulphate, B., 140.

Yamanouchi, A. See Kosaka, Y.

Yamasaki, I., and Karasima, T., acetoin formation in the acetone-butyl alcohol fermentation, A., III, 434.

and Simomura, M., production of d-mannitol from glycerol by moulds of the Aspergillus glaucus group. I., A., III, 432.

Yamasaki, Kazumi, and Yuuki, M., bile acids of alligator tortoises, A., II, 20.

Yamasaki, Kazuo, absorption spectra of complex metallic salts of 2:2'-dipyridyl, A., I, 547.

Yamauchi, T. See Kondo, S. Yamazaki, J. See Ochi, S.

Yamazaki, K., and Ota, S., composition of light oil for high-speed Diesels, B.,

Yamazaki, T., and Okida, T., industrial significance of vulcanisation of rubber without sulphur, B., 372.

Yanagi, K., stability of colloid osmotic pressure and of serum-protein, A., III,

Yanagita, M. See Asahina, Y.

Yanai, B., effect of yohimbinylamine, A., III, 138.

Yang, P. S., organo-arsenic compounds, A., II, 267.

and Cheng, C. T., isolation of aminoacids from human hair, A., III, 295.

and Lo, C. P., organo-arsenic compounds. II. Arsenation of aniline; metallic arsanilates, A., II, 127.

and Wang, T. Y., organo-arsenic compounds. III. Arsination of phenol and derivatives of hydroxyphenylarsinic acids, A., II, 356.

Yang, S. T., and Hsieh, P. J., synthesis of drugs containing the phenanthrene nucleus. I. 2- and 3-Phenanthrylephedrines, A., II, 146.

Yanick, N. S. See Ricci, J. E.

Yanowski, L. K. See Hynes, W. A., Malko, M. G., and Winkley, J. H. Yant, J. W., magnaflux inspection of

pressure-vessel welds, B., 794.

Yant, W. P., Pearce, S. J., and Schrenk, H. H., microcolorimetric determination of toluene, A., II, 92. and Schrenk, H. H., distribution of

methyl alcohol in dogs after inhalation and administration by stomach tube and subcutaneously, A., III, 426.

Yao, C.-H., and Sun, C. E., dipole moment and structure of tellurium dimethyl di-iodide, A., I, 169, 498.

Yao, Y. T. See Shen, S. T. Yarnall, W. A., and Wallis, E. S., condensation of dehydroandrosterone with ethyl a-chloropropionate, A., II, 294.

See also Hurd, C. D. Yarrow, W. S. See Lemale, P. C., and Newcon Industries.

Yarsley, V. E., celluloso ester plastics, B., 808.

Yasuda, I. See Kasahara, M.

Yasue, M. See Asahina, Y.

Yasukawa, Y., colon group of [bacteria from] fish, A., III, 487.

Yasuzumi, G., isoelectric point of animal tissues. V. Certain cells, A., III, 167. Yates, A. L. See Tui, C.

Yates, C. E., and Anaconda Copper Mining Co., apparatus for electrodeposition [of

copper sheet], (P.), B., 691.

Yates, E. D. See Henelly, T. J. Yates, E. L. See Owen, E. A.

Yates, G., apparatus for utilisation of waste heat, (P.), B., 739.
Yates, H. See Creamery Package Manufg.

Co.

Yates, J. W. See Costigan, S. M.

Yates, W. See Mathews & Yates, Ltd. Yates, W. J. See Bataafsche Petroleum Maats.

Yawger, E. S., and Sherman, J. M., Streptococcus lactis variants not fermenting glucose, A., III, 182. Streptococcus cremoris, A., III, 275. Yearian, H. J., and Howe, J. D., intensity

of scattering of electrons as a function

of angle, A., I, 541. Yee, J. Y., and Davis, R. O. E., adjustable sensitive thermoregulator, A., I, 48. Determination of urea-nitrogen in fertiliser mixtures, B., 478.

Yee, J. Y., Davis, R. O. E., and Hendricks, S. B., double compounds of carbamide with magnesium nitrate and magnesium sulphate, A., I, 256.

Yegan, W., possible value of hydrogen ions in forecasting taste and odour periods by algae and decomposition of organio matter, B., 849.

Yeh, H. L. See Kung, L. C.

Yelland, W. E. See Davis, T. L.
Yemm, E. W., respiration of barley plants. III. Protein catabolism in starving leaves, A., III, 409.

Yen, A. C. H., chemical and physical factors causing bacteriolysis, A., III, 398.
Yen, C. A., and Leung, W. K., decoloris-

ation of caramel solutions by active carbon, B., 717. Yen, W. H. See Tang, Y. C.

Yen, Y. Y. C., improvement of the apparent sp. gr. of smokeless powder, B., 1412. Yenko, F. M., and Baens, L., tannin content of Philippine oak barks, B., 951.

Baens, L., and Serrano, F. B., effect of moulds on Bakauan bark [Rhizophora spp.] and tanning liquors, B., 374.

See also Baens, L.

Yerby, L. D., relation of urinary excretion of estrone to the menstrual cycle of normal women, A., III, 437.

Yerkes, L. A. Seo Rice, A. C. Yerzley, F. L., evaluation of rubber and rubber-like compositions as vibration absorbers; apparatus for automatic recording, B., 1091.

Yewell, P. R., separating minerals from

ores, (P.), B., 53. Yi, C. S. See Zé, N. T.

Yin, C. L., internal energy-pressure chart for wet and superheated steam vapour, B., 300.

See also Chang, Ta Y. Yin, H. C., effect of [hetero-]auxin on Chlorella vulgaris, A., III, 241.

Yin, Y. C., 7-iodo-8-hydroxyquinoline-5-sulphonic acid as a reagent for the colorimetric determination of ferric iron in biological products, A., I, 376.

Yli-Uotila, T. See Kauko, Y. Ylinen, E. See Simola, P. E.

Ynalvez, L. A. See Villegas, V.

Yngve, V. See Union Carbide & Carbon Corp.

Yntema, L. F. See Winchester, R.

Yoder, L., chemical activation of sterols. I. Nature of floridin activation of cholesterol, A., II, 16. See also \mathbf{Eck} , J. C.

physical nature of erosion losses, B., 706. Yoder, R. E., aggregate analysis of soils:

See also Diseker, E, G, ...

Yoe, J. H., organic reagents in colorimetry; microtechnique for search of new organic colour reactions, A., I, 378, and Hall, R. T., 7-iodo-8-hydroxy-

quinoline-5-sulphonie acid as a reagent for the colorimetric determination of ferric iron, A., I, 377.

Yokela, E. See Okey, R.

Yokota, T., coal-liquefaction research in the Imperial Japanese Navy, B., 1001. Yokote, M. See Maki, T.

Yokoyama, M. See Kotake, M.

Yoneda, A. See Masayama, T.

Yonemura, S. See Nihon Denki Kogyo Kabushiki Kaisba.

York, A. F., and Sternau & Co., S., solidified [fuel or cleaning] composition, (P.), B., 1306.

Yorke, W. See Clark, A.J., and Lourie, E.M.Yorston, F. H. See Green, H., and Potter, G. J. C.

Yoshida, Shuichi, biochemistry of copper. XIX. Influence of copper on the oxidation quotient of urine, A., III, 213.

Yoshida, Sotaro, a crayon useful as a water-

colour paint, (P.), B., 370.

Yoshida, U., anomalous relation between the specific volume of liquid water and temperature, A., I, 558.

and Nagatu, S., rearrangement of the crystals of a metal on recrystallisation, B., 1222.

Yoshii, J., mechanism of gas flow through a [cement] rotary kiln. I.—III., B., 1343.

Yoshii, T., and Iwakiri, I., relative thermal expansion of shell, coating, and lining brick of the cement rotary kiln. I. and II., B., 1054, 1208.

Yoshii, T. See Nukada, S. Yoshikawa, T., phloridzin. VII. Effect on absorption of carbohydrates from the small intestine, A., III, 130.

Yoshimura, H., applicability of the antimony electrode to determination of $p_{\rm H}$, A., I, 96. Nature of glass electrode potential. II. Effect of water on potential of the glass electrode, A., I, 567.

Yoshimura, J., Sudô, T., and Fukazawa, Y., lepidolite from Kyûbiri, Korea, A., I, 270.

See also Iimori, S.

Yoshimura, S., and Sakurai, S., organic VI. Spectrophotochemistry. and photo-chemical study of the colour sensitiser of dialkylaminoarylpolymethinecycloammonium, A., I, 597.

Yoshimura, Sadahiko. See Hanzawa, J. Yoshimura, Shinkichi, oceanographical obscrvations of Simoda Bay, Izu Peninsula, A., I, 203.

Yoshimura, T., todorokite, a new mang-anese mineral from the Todoroki mine, Hokkaido, Japan, A., I, 383.

Yoshitomi, M., gastric ulcer formation by bile acid salt, A., III, 172.

Yosida, M., toxic effect of high doses of liver oils and activity of yeast in preven-

tion of toxicity, A., III, 135. Yosikawa, H., biochemistry of copper. XVI. Copper content of black and white hairs of aged people, A., III, 213.

Yosinaga, T., degradation of lecithin; separation of choline from lecithin by taka-diastase, A., III, 96.

Yosioka, I. See Asahina, Y.

See Anderson, T. F., Eberz, Yost, D. M. W. F., and Stitt, F.

Yost, F. L. See Nordheim, L. W. Yothers, W. W., and Miller, R. L., adhesives for sulphur dusts, B., 378.

Youden, W. J., and Zimmerman, P. W., field trials with fibre pots, B., 377.

Youell, J. E. See Distillers Co. Youker, M. A. See Holt, L. C.

Youker, M. P., and Phillips Petroleum Co., [petroleum] distillation process, (P.), B., 19. Conversion of hydrocarbon gases and liquids, (P.), B., 19. Motor fuels, (P.), B., 19. Natural gas conversion process, (P.), B., 114. Combined stabilising and gas-conversion process, (P.), B., 320. Treatment of hydrocarbon fluids, (P.), B., 646. Removal of hydrogen sulphide from liquids, (P.), B., 1162.

Youmans, J. B., Corlette, M. B., Frank, H., and Corlette, M., failure of aspirin to affect urinary excretion of ascorbic acid,

A., III, 264.

Young, A. A. See Kodak, Ltd.

Young, A. F., weed killers and their application, (P.), B., 1391.

Young, D. J., and Young-Whitwell Gas Process Co., apparatus for manufacture of combustible gas, (P.), B., 1158.

Young, E. G., separation and characterisation of the proteins of egg-white, A., III, 416.

Young, F. G., chemistry of muscle-glycogen, A., III, 252. Permanent experimental diabetes produced by pituitary (anterior lobe) injections, A., III, 379. See also Callow, R. K.

Young, F. M., heat exchanger, (P.), B., 630. Young, F. W., rotary drum filter, (P.), B.,

994.

Young, G. See Pincus, G. Young, G. W., fish-oil sprays as affecting the carbon dioxide intake by Jonathan apple leaves, B., 171.

Young, H. A., oxidation of ethyl mercaptan and ethyl disulphide by bromine in presence of water, A., II, 271.

and Young, M. B., rate of oxidation of ethyl disulphide by bromine, A., II, 271. Young, H. C., reducing lime content of Bordeaux mixture, B., 171.

and Beckenbach, J. R., spreader materials for insoluble copper sprays, B., 1107. Young, H.J., undue cylinder wear in internal-

combustion and steam engines, B., 109. Young, J., habitual abortion and stillbirth

syndrome and late pregnancy toxxmia; vitamin-E and the prolan-progesterone mechanism, A., III, 257.

Young, J. A., jun. See Quinn, A. Young, J. B. See MacIntire, W. H.

Young, J. H., and Robertson Co., H. H., stable, fire-resisting composition, (P.), B., 663.

Young, J. W., micro-distillation apparatus, A., I, 50.

and Eastwood, F. A., unified boiler control; application of variable voltage to boiler-house auxiliary control, B., 507.

Young, J. Z., physical and chemical properties of nerve fibres and the nature of synaptic contacts, A., III, 387. See also Bear, R. S.

Young, K., and Lay, H., determination of aluminium, A., I, 263.

Young, L., inositol and the respiration of brain, A., III, 172. Effect of pyocyanine on the metabolism of cerebral cortex, A., III, 465.

Young, Leona, and Porter, C. W., stereochemistry of deuterium compounds. I. Optical rotation of methylhexyldeuterocarbinol [β -deuteroxyoctane]. II. Methylbenzylamine, A., II, 132, 409.

Young, L. A., magnetic moment of the proton, A., I, 491.

See also Inglis, D. R.

Young, L. E., comparison of the Corner-Allen and Clauberg tests for assay of

progestin, A., III, 40.
Young, M. B. See Young, H. A.
Young, M. W., composition of [New Zealand sheep] bones, normal and abnormal, A., III, 118.

Young, O. C., [halibut] freezer studies, B.,

Young, P., high-solids ice cream, B., 834. Young, P. L. See Standard Oil Development Co.

Young, R. See Wadleigh, C. H. Young, R. B., alterations effected by solutions in limestones of the dolomite series, A., I, 52.

Young, R. C., and Hastings, J. L., reaction of lanthanum oxide with ammonium

iodide, A., I, 321. Young, R. C. K., pyrometers, (P.), B., 858. Young, R. E., asparagus investigations, B., 480.

Young, R. T., and Fox, D. L., seminal vesicles of the goby; chemistry and physiology of the vesicular fluid, A., III, 377.

Young, R. T., jun., frequency of occurrence of cosmic-ray bursts as a function of altitude and size of burst, A., I, 546. Cosmic-ray measurements with a small ionisation chamber. II. Comparison of small bursts at different altitudes and their variations with thickness of shield, A., I, 594.

and Street, J. C., cosmic-ray measurements with a small ionisation chamber. I. Variation with altitude and latitude of the total ionisation for various

shields, A., I, 594.
Young, R. V. See Fuson, R. C., and

Gilman, H. Young, T. F., and Machin, J. S., heat content and heat capacity of aqueous sodium chloride solutions, A., I, 31.

Young, W. G., Jasaitis, Z., and Levanas, L. D., stereoisomerism of unsaturated compounds. II. Composition of dipropenyl glycol. III. Preparation of cis- and trans- Δ^{δ} -oetenes, A., II, 3, 132.

and Lane, J. F., allylic rearrangements. IV. Composition of butenyl bromides prepared from crotyl alcohol and methylvinylcarbinol, A., II, 480.

See also Blacet, F. E.

Young, W. H. See Ellis, R. W. Young, W. S., and Wagner, E. C., condensations of aromatic amines with formaldehyde in media containing acid. VII. Polymeric states and structures of some anhydro-p-alkylaminobenzyl alcohols, A., II, 286.
Young, W. T. See Kersten, H.
Young, W. W., bright-annealing of non-

ferrous metals, B., 47. Young Radiator Co. See Witzel, E.

Young-Whitwell Gas Process Co. See

Young, D. J. Youngburg, G. E., phosphorus metabolism. VII. Course of phosphorus in alimentary

tract of the rat, A., III, 306. Younger, A. J. See Houstoun, R. A.

Youtz, M. A., and Northern Paper Mills, absorbent paper, (P.), B., 230. See also Standard Oil Co. of Indiana.

Yovanovitch, A., utilisation of fructose in diabetes, A., III, 124. Yovanovitch, S. L., electro-analytical de-

termination of antimony, A., I, 265.

Yu, P. Y. See Ou, C. W. Yu, S. H., theory and design of the cam of an oscillating-crystal X-ray spectrograph, A., I, 427.

and Beevers, C. A., crystal structure of zinc bromate hexahydrate,

Zn(BrO₃)₂,6H₂O, A., I, 401. Yuan, H. C., dipole moment and structure

of dimethyltelluronium di-iodide, A., I, 498.

and Li, H. C., amino-acids containing sulphur. I. Synthesis of 2-thienylalanine, A., II, 429.

Yuan, L. T. See Zé, N. T. Yuasa, G., Diesel engines and fuel, B., 1298. Yuasa, T., spectra of silicon fluoride, A., 1, 596.

Yudkin, J., dehydrogenases of B. coli. IV. Lactic dehydrogenase, A., III, 310. Cell structure and enzymic activity, A., III, 352.

See also Passmore, R. Yü, C. H. See Kao, C. K.

Yü, H. A., and Tien, P. Y., electrolytic rectifier, B., 54.

Yuill, L. A. See Alter, C. M. Yuille, J., heat and sound insulators, (P.), B., 301. Filters, (P.), B., 304. Filters for gaseous fluids, (P.), B., 307. Yuin, K. H. See Sah, P. P. T.

Yukawa, H., and Sakata, S., efficiency of the γ -ray counter, A., I, 267. Nuclear transformation with absorption of the orbital electron, A., I, 278. Theory of internal pair production, A., I, 278.

Yumen, R. See Matsui, M. Yuska, H. See Sobel, A. E.

Yust, H. R. See Lathrop, F. H.
Yutzy, H., and Kolthoff, I. M., ageing of
fresh precipitates. XII. Equilibrium between mixed crystals of silver chloride and bromide and solutions, A., I. 363.

See also Kolthoff, I. M.

Yuuki, M. See Yamasaki, Kazumi. Yvon, J., thermodynamic potential at constant volume in solutions of strong electrolytes, A., I, 362.

Zabavin, V. I., separating phenol mixtures in the phenol tar fractions. II., B., 106. Zablinsky, K. See Spengler, O. Zabolotzki, T. V. See Rubanik, M. Zabrodina, A. S. See Nametkin, S. S. Zaccagnini. Seo Nuccorini, R. Zacharewicz, W. See Dupont, G. Zacharias, J. R. See Millman, S., and Zacharjin, G., and Spivak, G., energy exchange of helium, neon, and argon atoms with a metal surface, A., I, 214. Zacharov, I. P., acidity of flour, B., 1259.

Zacharov, P. A. See Gubkin, S. I. Zacharova, A. I., characteristics of hydrocarbons of the C_nH_{2n-4} series with conjugated double and triple linkings, A., 11, 269.

Zacharova, V. N. See Menkovski, M. A. Zacherl, M. K., creatine and creatinine metabolism. IV. Creatinine and creatine from ox-serum. V. Origin of urinary creatinine, A., III, 382. See also Fawaz, G.

Zacherl, S. See Walterskirchen, L. Zachoval, L. See Hrdlička, J.

Zachrov, B. S., yarovisation of perilla, B.,

Zack, M., electric arc-welding, (P.), B., 458. Zack, S. I., mechanical filtration of effluents, B., 849.

Zacks, D. See Pope, A. S.

Zacwilichowski, J., obtaining aberrative forms of butterflies by chemical treatment, A., III, 264.

Zäch, C., determination of fat in food-stuffs by means of the refractometer, B., 1127.

Zänker, K. See Schliessmann, O. Zagami, V., influence of insulin on heartglycogen, A., III, 41. Urinary creatine, sulphur, phosphorus, and chlorine during fasting and alimentation, A., III, 61. Seminal fluid. I. $p_{\rm H}$ of normal human seminal fluid, A., III, 377.

Zagami, V., and Capraro, V., urinary creatine, sulphur, phosphorus, and chlorine during fasting and alimentation, A., III, 61.

Zagorianskaja, N. V. See Amitin, B. Z. Zaharia, A., Angelescu, E., and Motoc, D., elimination of methyl alcohol from potable spirits, B., 77. Zahgeim, L. N. See Gutin, S. S.

Zahl, P. A. See Pincus, G. Zahn, C. T., absorption coefficients for thermal neutrons, A., I, 490.

and Spees, A. H., ratio e/m for primary β -rays from radium-E, A., I, 595.

Zahn, E. A., viscosity determination, B.,

Zahn, K., and Drexler, F., linseed oil and its admixtures as protective agents for natural stones, B., 1209.

Zahn, O., detoxification of [town] gas, B.,

Zahoorbux, F. D. See Purcell, R. H. Zaidan Hojin Rikagaku Kenkyujo, [enamel-] coated insulated wires, (P.), B., 359. Coated insulated wire, (P.), B., 800.

Zaidel, A. See under Seidel, A. Zaides, A. L., physico-chemical properties of solutions of sulphite-chromium com-

plexes, A., I, 81. Zaidlin, A. E., and Talmud, D. L., tanning by means of gases, B., 1247.

Zaitschenko, P. Z., determination of oil content of seeds: new extraction

apparatus. II., B., 806. Rshechin, V. P., and Pogonkina, N. I., determination of water in vegetable oils, B., 941.

Zaitzev, G. P., checking and regulation of the Brincll microscope, B., 299. Sliderule calculations for testing flat specimens, B., 299. Slide-rule calculation of transient resistance, oB, directly from the

impression diameter, B., 299. Zaitzev, N. I., determination of sulphur in iron ores, B., 444.

Zajic, E. See Spath, E. Zak, A. P., determination of rate of formation of glass, B., 670. Effect of rocks on process of glass melting and on some physico-chemical properties of glasses,

Zakarias, L., removal of fatty matter [from textile and metal surfaces], B., 256.

Zakomorny, M. See Chrzaszez, T. Zakoschtschikov. See under Sakostschikov. Zakrzewski, C., electrical Kerr effect in nitro-compounds, A., I, 13.

Zalar, J. See Harvey, R. B.

Zaleski, J. Z., bituminous mortars, B., 348. Seo also Wasilewski, L.

Zaliopo, M., elimination of scale formation in [glycerol] concentration, B., 365.

Zalogin, N., and Netschaeva, N., possibility of influence of long waves of a highfrequency discharge on gaseous chemical reactions, A., I, 574.

See also Balandin, A.A.

Zamaron, J., balance of sugar in beets and sugar in diffusion juice plus determined losses, B., 482. Zambotti, V. Seo Cardin, A.

Zametkin, R. Seo Hathorne, B. L.

Zamischlaeva, A., tautomcrism of gossypol, A., II, 385.

Zamislov, A. D., and Savostianov, proteolysis in salting of herrings, B., 613.

Zamoruev, C. M. See Slavinski, M. P. Zamotaev, S. P., and Besedin, S. M., coated porcelain tubes as stable protective sheaths for thermo-couples, A., I, 479. Zamotorin, M. I., hardness and electrical conductivity of the aluminium-tin system, A., I, 233.

Zander, M., apparatus for separation of solid or liquid particles from gases, vapours, or smoke, (P.), B., 402.

Zanko, A. A. See Brodski, A. E. Zanko, A. M., and Bursuk, A. J., determination of small amounts of lead by means of dibromohydroxyquinoline. II., A., I, 328. Determination of copper in cast iron and steel by means dibromohydroxyquinoline, -of∶ 1061.

and Butenko, G. A., separation of iron, titanium, and aluminium from their mixtures by means of 8-hydroxyquinoline, A., I, 264. Determination of copper in cast iron and steel by means

of quinaldic acid, B., 1212.
and Stefanovski, V. F., mechanism of redox reactions. I. Qualitative relationships, A., I, 246. Analysis of manganese ores, B., 665.

Zapf, C., magneto-optical Kerr effect, A., I, 13.

Zapf, L. See Texas Co.

Zaporoshetz, I. D., and Kind, V. V., airand salt-resistance of puzzuolana-Portland cements with added calcium chloride, B., 552.

Zappi, E. V., and Salellas, J. F., new aromatic arsenical compounds. I. Arsenical derivatives of diphenylmethane, A., II, 172.

See also Cannoni de Degiorgi, A., and Degiorgi, (Mme.) H.

Zaproinetov, B., and Kamsolova, Z., synthesis of hydrosols of sparingly solublo salts by electrolysis; hydrosols of copper arsenate and copper arsenite, A., I,

Zaprometov, V. G., Smolina, L. V., and Schamsiev, A., changes in structure of Central Asiatic clays under the influence of peptisation, B., 345.

Zaring, I. I., and Popova, G., electrofilter for separation of hydrofluosilicic acid from gases, B., 32.

See also Filippenko, M. A.

Zarinš, E., and Ozolins, J., bromine and silica contents of [water from] Riga Bay and the Baltic Sea, A., I, 381. and Putnipa, C., vitamin-C of Latvian food-stuffs, B., 722.

Zarotsehenzev, M. T., freezing and resuscitation of animals, A., III, 109.

Zarrow, M. X. Seo Pomerat, C. M. Zarse, R. A., etching process [for copper printing-plates], (P.), B., 250.
Zartman, W. H. See Dn Pont de Nemours

& Co., E. I.

Zasedateleva, A. See Berlin, L. E. Zaslavski, S. E. See Schojchet, S. N.

Zastrow, E. See Fabbriche Riunite Industria Gomma Torino "Walter Martiny" Industria Gomma-Spiga-Sabit-Life.

Zatz, M. R. See Zubkova, S. R. Zauber, E.L., and Vorobiev, A.L., influence of granule size of sodium peroxide on the process of fusion with ferro-silicon, A., I, 259.

Zaunbauer, B. See Lindner, J. Zans, E. A., and Fosdick, L. S., antipeptic influence of gastric mucin, A., III,

Zautschenko, P., Krupitzkaja, L., and Koehova, K., determining the fat content of oil seeds and cake by the shaking method, B., 57.

Zavarine, I. N., initial stages of magnetic and austenite transformations in a car-

bon steel, B., 44. Zaverina, E. See Dubinin, M. Zavertnik, J. See Barrett Co.

Zawadski, J., and Bretsznajder, S., preparation of pure aluminium salts from clays and kaolins. I. Preliminary experiments, B., 541.

Zawadzki, B., application of hydrotropy to acceleration of hydrolysis of yperite,

A., III, 216.

Zďárský, J., corrosion of metals by long contact with ethyl alcohol and its mixture with gasoline, B., 1298.

Zé, N. T., and Piaw, C. S., absorption bands in the neighbourhood of lines of the principal series of rubidium and casium, A., I, 336.

and Po, W. W., absorption spectrum of casium, A., I, 2. Influence of an electric field on absorption spectrum

of sodium, A., I, 271.
and Tsiang, T. S., band spectra and energy of dissociation of the rubidium

molecule, A., I, 486.

and Yi, C. S., continuous absorption band of rubidium in presence of foreign gases, A., I, 54. Displacement of principal scries lines of rubidium by addition of rare gases, A., I, 272.

and Yuan, L. T., pressure effect on sensitivity of different photographic films, B., 622.

Zech, J. D. See Osborn, W. O.

Zechmeister, L., chromatographic determination of provitamin-A, A., III, 324. and Cholnoky, L. von, paprika pigment. X. Citraurin from capsanthin, A., II, 384.

Cholnoky, L. von, and Ujhelyi, (Mlle.) E., chromatography of colourless substances, A., I, 151.

and Tuzson, P., polyene pigment of the orange. II. Citraurin, A., II, 443.

Zechnovitzer, E. V., crystallisation of potassium chloride from the fused state; preparation of large monocrystals of sylvine, A., I, 627.

Zedin, N. I. See Slavinski, M. P.

Zedlitz, O., perowskite, uhligite, and dysanalyte, A., I, 384.

Zeerleder, A. von, casting ingots of aluminium alloys for rolling, with special reference to the mould question. B., 576. Precipitation-hardening of aluminium castings, B., 576. Selection and production of aluminium casting alloys, B., 926, 1357.

and Burg, E. von, effect of temperature on tensile properties of aluminium and its alloys in completely stabilised

state, B., 1222.

and Hurter, H., cost of production of aluminium, B., 450.

and Zurbrügg, E., mechanical surface treatment of aluminium and its alloys, B., 1223.

Zegelman, M. E. See Terentiev, A. P. Zeglin, H. See Griebel, C. Zeh, L., Konrad, E., and Durand & Huguenin A.-G., stable [vat dye] preparations, (P.), B., 653.

Zehnle, P., and Koechlin, A., heating [cooling] plant, and use of heavy hydrocarbon vapours such as butane, (P.), B.,

Zeiberlich, Z. K., preparation of sulphuric acid without intermediate production of nitrosylsulphuric acid, B., 131.

Zeicher, M. See Rey, M.

Zeide, O., and Petrov, K., altax (benzthiazyl disulphide) as an accelerator of rubber vulcanisation, B., 372.

Zeidler, E. See Hüttig, G. F.

Zeidler, G., care of high-quality paints, B., 62. Trend towards indigenous raw materials in the paint industry, B., 1086.

See also Wolff, Hans. Zeiller, O. See Geiger, H.

Zeise, H., variation of some technically important gas equilibria with temperature and pressure, A., I, 516.

Zeiss Ikon Akt.-Ges., light-sensitive layers for photo-electric cells, (P.), B., 461.

Zeitfuchs, E. H., new system of Ostwald viscosimeters speeds laboratory routine, B., 871.

Zeldin, S., pigments and dyes for casein covering paints for leather, B., 1086.

and Ponomarenko, R., comparison of various softeners for casein pigments for leather, B., 1086.

Zeldovitsch, J., theory of interaction of atom and metal, A., I, 40. Theory of the Freundlich adsorption isotherm, A., I, 299.

Zeldovitsch, P. J. Seo Mindlin, S. S. Zelenetzki, B. P., apparatus for determining carbon in ferrous alloys, B., 681.

Zelenina, E. M. Sce Broun, A. S. Zeleny, L., and Coleman, D. A., refracto-

metric determination of iodine value in flax-seed oils, B., 58. Zelinski, N. D., D. Mendeleev and the

phenomena of contact, A., I, 415. and Halpern, G. D., petroleum from Kos-

Tschagil, B., 640.

Musaev, I. A., and Halpern, G. D., Kos-Tschagil petroleum. II. Catalytic dehydrogenation of benzine-ligroin fractions, B., 1004.

and Schaehnazarova, E. M., decomposition of ethylcyclopentane under conditions of dehydrogenation catalysis, A., II, 181. Desulphuration of organic compounds by catalysis with platinum, A., II, 181.

and Uschakov, M. I., hormones of the androsterone group, A., II, 251. Zeljanski, V. See Vilnjanski, J.

Zell, F. See Ghalioungui, P.

Zeller, A. See Edlbacher, S.:

Zellhoefer, G. F., solubility of halogenated hydrocarbon refrigerants in a organic solvents, A., II, 395. Refrigerant mixture, (P.), B., 97. Absorption refrigeration, (P.), B., 857.
Zellinskaja, T. Sec Ablezova, K.

Zellstoff-Fabrik Waldhof, and Haas, R. crêping webs of paper and other sheet material, (P.), B., 1038.

and Noll, A., nitrocellulose, (P.), B., 229. Zelmanov, I. See Berdennikov, V. P.

Zeltner, J. See Rivier, H.

Zelvenski, J. D., solubility of carbon dioxide in water under pressure, A., I, 610. Zemel, V. K., analysis of monazites from

the Aldan and S. Yenisei auriferous deposits, A., I, 155. Colorimetric determination of selenium and tellurium in

zemiatizin, V. P., volumetric determination, V. P., volumetric det

ation of sulphur in pyrites, B., 340.

Zemlianski, I. I., and Razumov, V. M., rapid determination of sulphur in iron ores, B., 444.

Zemplén, G., Csürös, Z., and Angyal, S., benzylated derivatives of β -glucosan and of glucose, A., II, 444.

and Gerecs, A., synthesis of lusitanicoside (chavicol-β-rutinoside), the glucoside from Cerasus lusitanic, Lois, A., II, 277.

Zemplén, J. See Schmid, R. Zender, J., production of citric acid [by

fermentation], (P.), B., 487. Zenghelis, C., and Stathis, E., catalytic action of metallic rhenium on ammonia synthesis, A., I, 192. Zenner, G. H. See Union Carbide &

Carbon Corp.

Zennström, A., sulphate-pulp production, B., 1036.

Zenor, H. M., cooling of a surface by photoelectric emission, A., I, 56.

Zentner, J. See Redlich, O.

Zepalova-Michailova, L., preparation of nitrobenzene with maximum specific resistance, A., II, 182.

Zepfler, L. H. See Standard Oil Development Co.

Zerban, F. W., and Sattler, L., turbidity in sugar products. V. Colour and turbidity of hand-refined sugars, B., 828. Absolute turbidity of raw sugars, B., 1393.

See also Sattler, L.

Zerbey, M. E., Orinick, M. T., and Willard, M. L., comparative microscopic tests of anabasine and related compounds; its purification and some physical constants, A., II, 314.
Zerling, M. R., action of thyroxine and

similar substances on development of sea-urchin larvæ, A., III, 187.

Zerrweck, W. See Fricke, R. Zettl, F. See Graf, R.

Zettler, L., action of vascular medicaments on the permeability of arteries, A., III, 350. Zettler, V. A., rapid determination of iron in electrolytes encountered in electro-

plating practice, B., 453. Zetzsche, F., Kalt, P., Liechti, J., and Ziegler, E., membranes of spores and pollens. XI. Constitution of lycopodium sporonin, tasmanin, and Lange sporonin, A., III, 331.

and Liechti, J., biochemically altered sporopollenins. XII. Membranes of spores and pollen, A., III, 408.

and Reinhart, H., humic acids of peat, B., 1291.

Zeun, L. H., and Adt Co., J. B., dryer, (P.), B., 197. Zevallos, G. D., calcareous deposits in the

environs of Lima, B., 1208.

Zeyen, K. L., welding of plain steels of high strength, B., 45. Chemical composition of welding rods and their alteration during welding, B., 575. Application of welding wires, showing an austenitie structure, to the welding of unalloyed and low-alloyed (nonaustenitio) steels, B., 930. Sce also Hackert, R.

Zeynek, R., iodonitrotyrosine, A., II, 499. and Waelsch, H., Thormalilen's reaction

in melanotic urine, A., III, 10. Zia, S.H. See Tung, T.Ziebeil, O. See Baukloh, W.

Ziegler, E. See Zetzsche, F. Ziegler, F. See Bauer, Erwin.

Ziegler, F. K., alloy containers for heattreating in liquid baths, B., 50.

and Haughwout, L. B., grain size of cast nickel-chromium heat-resisting alloys, B., 1220.

Ziegler, G. E., crystal structure of potas-

sium nitrite, KNO₂, A., I, 288. Ziegler, K., Häffner, F., and Grimm, H. stereochemical studies. II. $cis-\Delta\beta$. Butene from $\Delta^{\alpha\gamma}$ -butadiene, A., II, 173.

and Hechelhammer, W., polymembered ring systems. VI. Tendency of formation of polymethylene ketones with more than twenty carbon atoms, A., II, 247.

and Holl, H., polymembered ring systems. VII. Tendency of formation of

rings containing oxygen, A., II, 174.

Lüttringhaus, A., and Wohlgemuth, K.,
polymembered ring systems. IX. IX. Pyrocatechol polymethylene ethers, A., II, 300. and Röhm & Haas Co., amidines, (P.),

B., 1022.

and Weher, H., preparation of polymethylene dihalides with long chains, A., IĬ, 316.

See also Lüttringhaus, A. Ziehl, O.A. See Taggart, A.F.

Ziel, A. van der, level scheme and band spectra of N_2 and N_2^+ , A., I, 335.

Zieliński, M. A., phosphorus in the early development of the frog, A., III, 214.

Ziemecki, S., absorption of cosmic rays in rock-salt, A., I, 213. Use of kryptonfilled ionisation chambers for cosmicray measurements, A., I, 480.

and Narkiewicz-Jodko, K., continuous variation of the cosmic-ray intensity in the higher layers of the troposphere, A., I, 163.

Ziener, T., glass-tubing connexions in large-scale chemical apparatus, B., 2. Ziervogel, M. See Schneider, Gustav. Zijp, L. T. van. See De Jong, H. G. B.

Zika, J. See Frejka, J. Zikeev, T. A., and Schifrin, M. G., rapid

determination of ash in coal, B., 404. Zilberfarb, M. I., and Rabinovitsch, M. A.overpotential of metals in presence of

colloids, A., I, 521. Zilberg, I., preparation and properties of N-chloro-derivatives of p-sulphonamido-

benzoic acid, A., II, 417.

Zilberkveit, E. K., and Vassiliev, L. A., mechanism of oxidative dyeing. I. Maturation of aniline-black in dyeing of animal fibres (hair), B., 661. Rapid colorimetric determination of fat content of wool, B., 765.

and Zubin, A. M., mechanism of oxidative dyeing. II. Pringsheim's rule and oxidative dyeing, B., 661.

Zilberman, G. B., preparation of dibenz-pyrenc, A., II, 184.

and Slobodnik, chlorination of benzene, B., 1167.

See also Raschevskaja, S. T. Zilberman, V. A. See Shukov, I. I.

Zilg, W. See Wieland, H.

Ziliberg, G. A. See Baschkirov, A. N. Zilius, why does emulsion-coated roll-film decompose even under water? B., 730.

Zilske, H., soaps with solvent additions. I., B., 365. Autoclave and Twitchell splitting [of fats]: a chemico-technical comparison, B., 1365.

Zilva, S. S., vitamin-P. I. and II., A., III, 328, 406. Vitamin-P, A., III, 498. Kidd, F., and West, C., metabolism of ascorbic acid in the apple fruit, A.,

and Morris, T. N., behaviour of added vitamin-C during storage of canned apples at ordinary temperatures, B., 1263.

Zilva, S. S. See also Johnson, S. W.

Zimarev, V. I., rapid determination of water-soluble and free phosphorus pentoxide in superphosphate, B., 435.

Zimens, K. E., investigation of polymorphic transformations of the alkalineearth carbonates by the emanation method, A., I, 403. Investigation of thermal behaviour of alkaline-earth carbonates by emanation method. I. Monotropic transformation of calcium carbonate. II. Enantiotropie transformations of barium and strontium carbonates, A.,

Zimmer, F., artificial resin varnishes and the linseed oil problem, B., 261. Influence of solvents and diluents on the nitrocellulose molecule, B., 655. Hygrometry in use of nitrocellulose lacquers, B., 811. Old and new nitro[cellulese] combination lacquers, B., 811.

Zimmerer Manufacturing Co., K. A., apparatus for preventing beer settling,

(P.), B., 1396.

Zimmerli, A., and Newport Industries, dihydroterpineol and menthone, (P.), B., 1025.

immerman, A. C., and Knaack, F. E., water-softening apparatus, (P.), B., 512. Zimmerman, H. M., and Cowgill, G. R., lesions of the nervous system in vitamin deficiency. IV. Effect of carotene in treatment of nervous disorder in rats fed a diet low in vitamin-A, A., III, 280.

Zimmerman, P. W., and Hitchcock, A. E., comparative effectiveness of acids, esters, and salts as growth substances: methods of evaluation, A., III, 329.

See also Youden, W.J.Zimmermann, E., the dedusting ratio; measurement of dust [in flue gas] and efficiency of flue gas dust separators, B., 1143. Zimmermann, G., "tube" discharges, A., I, 55.

Zimmermann, K., experiments on the "blue-smoking" of roofing tiles, B., 1051. Zimmermann, Karl, anatomy of the testa of Leguminosæ; hard-shelled seed and

significance of the strophiolum, A., 111, 48. Zimmermann, W. (Hohenheim), Malsch, L., methyl alcohol content of fruit brandies, B., 607. Fermentation of cherry wort with added acids, B., 607.

and Wöger, K., comparison of production of choice alcoholic spirits from fruit mashes and expressed fruit juices, B., 967.

Zimmermann, W. (Tübingen), growth-substance and plagiotropic movement in Parthenocissus, A., III, 81.

Zimmermann, Wilhelm, colorimetric determination of sex hormones. II., A., III, 102.

Zimmet, D., and Dubois-Ferrière, H., reduced glutathione and vitamin-C in the granular venom of the toad (Bufo vulgaris), A., III, 45. Distribution of vitamin-C in organs of the toad (Bufo vulgaris), A., III, 45. Vitamin-C in saliva of children with infectious diseases, A., III, 104. Variation of reducing power (vitamin-C) of human saliva with age, A., III, 104. Vitamin-C and reduced glutathione in human tonsils, A., III, 154. Effect of tonsilectomy on the vitamin-C content of human saliva, A., III, 154. Vitamin-C in normal and paradentotic human saliva, A., III, 154. Histochemical localisation of vitamin-C in lymphoid organs (tonsils, appendix), A., III, 405.

Zimmet, D., and Perrenoud, J. P., difference between reactions with nitroprusside of reduced glutathione, cysteine, acetone, and creatinine: rôle of $p_{\rm H}$, A., III, 8.

and Sauser-Hall, P., vitamin-C content of the ejaculate of the guinea-pig, A.,

Zink, F. J., and Grandfield, C. O., humidity control in large chambers by means of sulphuric acid solutions, B., 708. See also Grandfield, C. O.

Zinke, A., and Pongratz, A. [with Scholtis, K., and Hanus, F.], perylene and its derivatives. XLIX. Perylene trihalides of K. Brass and E. Clar, A., II, 142.

Zinkov, Z. E., Daniuschevski, J. L., Reinstein, V., and Chomiakovski, G. M., determining naphthalenesulphonic acids, B., 324.

Zinkova, Z. See Delimarski, J. K. Zinn, R. E., and Victor Chem. Works, flaking of amorphous solids [alkali meta- and pyro-phosphates], (P.), B.,

Zinn, W. H., low-voltage positive ion source, A., I, 635.

Zinner, K., diagram to illustrate the course of combustion in an engine, B., 1157.

Zinoviev, A., catalytic hydrogenation of fats, B., 364.

and **Dodonova**, A., refining of extractive cottonseed oil, B., 1079.

and Drukker, S. V., ketonic rancidity of fats, B., 1077.

and Kuroschkina, N., formation of isooleic acid during hydrogenation [of oils], B., 366.

Vinogradova, M., and Ivanova, V., nickel formate as a catalyst in hydrogenating fats, B., 364.

Vinogradova, M., and Popova, O., regenerating simple nickel compounds [for hydrogenation of fats] directly

in oil, B., 364. Zinoviev, V. S., and Levin, I. A., machine for determination of fatigue [of steel] by means of alternate stretching and compression, at high temperatures, B., 446. Oven for testing corrosion by gases from combustion of benzine mixtures, B., 451.

Zintl, E., and Harder, A., metals and alloys. XXI. Stoicheiometry of binary sodium

compounds, A., I, 73.

Harder, A., and Haucke, W., metals and alloys. XXII. Alloy phases with the fluorite structure, A., I, 296.

and Treusch, O., metals and alloys. XX. X-Ray analysis of gallium bronzes, A., I, 73.

Zipf, K., and Gottlebe, P., biological evaluation of anti-anamia liver preparations, A., III, 58.

and Mertins, H., influence of analeptics on avertin narcosis, A., III, 266.

Zippel, F., evaluation of [fish-]liver oils, B., 258.

Zirconium Corporation. See Little, W. T. Zirkler, J., connexion between cosmic rays and meteoric swarms, A., I, 390. Ultraradiation and active solar processes, A., I, 594.

Zirzow, E. C., sand control in a malleable

foundry, B., 1217.

Zischler, H. See Fischer, Hans. Zitzer, A. I. See Kabatschnik, M. I. Zjukova, M. A. See Belitzer, V. A.

Zlatarov, A., and Poppov, I. D., enzyme chemistry of tea and wine, B., 615. Zlatkin, S. G. See Mamikin, P. S.

Zlotowski, I., calorimetric study of γ -radiation from radium-B+C, A., I,

Zmachinsky, A. See Benedict, F. G., and Ellis, L. N.

Zmaczyński, A., ebulliometric and tonometric researches on chemically pure liquids. III. Carbon tetrachloride as a physico-chemical standard, A., I, 174. Carbon tetrachloride as a physico-chemical standard, A., II, 81.

Zmaczynski, E. W., periodic system of the elements in a new form, A., I, 429.

Znamenski, A. V., emeries. III. Rôle of emeries in cement solution. IV. "Activity" of emeries, B., 553. Determination of mean capillary radius in finely-granular media, from the coefficient of distribution of water, B., 593.

and Sipovski, G. V., cement-mineral colours based on sodium silicate, B.,

Zobel, A. See Mecke, R.

Zobell, C. E., Anderson, D. Q., and Smith, W. Whitney, bacteriostatic and bactericidal action of Great Salt Lake water, A., III, 319.

Zobrist, L., and Gruber, M., diffusion of water through agar jellies, A., I, 81.

Zochowski, A. See Hrynakowski, K. Zöberlein, H. See Scheffer, F. Zoellner, E. A. See Werkman, C. H.

Zollikofer, C., effect of folliculin on plants, A., III, 81.

olli kofer, E. See Hostettler, H. Zollinger, R. See Pijoan, M.

Zolog, N. See Michail, \hat{D} .

Zolotareva, N. V., electrolytic method of determining slag inclusions in silicon and chrome steels, B., 1062.

Zolotov. See Schtscherbakov.
Zolotov, V. A. See Kuznetzov, V. D.
Zolotuchin, V. K., gravimetric determination of iron and aluminium by precipitation as hydroxide with ammonia, in presence of calcium, barium, and magnesium, A., I, 580. Determination of

calcium sulphate in gypsum, B., 540. Zombory, L. von, composition of Vaskö-Dognácska granites, A., I, 206. Volumetric determination of sulphate with sodium rhodizonate, A., I, 424. Indirect titration of sulphate with barium chloride using sodium rhodizonate as

indicator in solution, A., I, 631. Zondek, B., impairment of anterior pituitary functions by follicular hormone, A., III, 40. Tumour growth in hypophyseal dwarfism, A., III, 228. Estrogenic substances in the Dead Sea, A., III, 361.

and Sulman, F., antigonadotropic factor, A., III, 438.

Zorkin, F. P., sensitive reaction for boric acid, A., I, 97.

Zorn, C. M., and Dalton, A. J., changes in composition of blood of the chick embryo

during ontogenesis, A., III, 164.

Zorn, E., [surface-]hardening machines
[for steel], B., 1352.

Zorn, H., problems of relationship between lubricating properties and chemical constitution of oils, B., 1299.

Zorn, K. See Felix, K. Zorn, W. M., Eickhoff, T. H., and Low Temp. Processing Co., disassociating the components of solutions and mixtures, (P.), B., 99.

Zosimovitsch, D. P., Butschkovski, M. V., and Brenaizen, O. M., X-ray study of surface Al-Cu alloys, formed in a galvanic element, A., I, 33.

and Kiritschenko, O. I., electrolytic preparation of magnesium hydroxide from aqueous magnesium chloride, B., 33.

See also Plotnikov, V. A.

Zotos, G., charging of high-speed rotary furnaces, (P.), B., 629. Discharging materials from high-speed rotary furnaces, (P.), B., 629.
Zotov, G. V., turbulent dyeing of wool at

temperatures below 100°, B., 30.

Zotov, P. D., use of waste chips from alkaline extraction of rosin in paper production, B., 534.

Zouckermann, R., sparking potential curves for ionisation by collision of the second kind, A., I, 273.

Zozaya, J., factors influencing sedimentation rate of erythrocytes, A., III, 289. Zscheile, F. P., jun. See Hogness, T. R.

Zselyonka, L., and Illényi, A., effect of the white bean on estrus in the mouse. II., A., III, 437.

See also Illényi, A.

Zsoldos, P. See Simon, Alexander. Zubarovski, V. M. See Gabel, J. O.

Zuber, K. See Simons, L.

Zubin, A. M. See Zilberkveit, E. K. Zubkova, L. R., oxygen consumption during lysis of bacteria (M. lysodeikticus)

by lysozyme, A., III, 148. Zubkova, S. R., Kotschukova, N. B., and Zatz, M. R., preparation of alcohol from wood hydrolysates, B., 486.

Zublin, E. W., and Texas Pacific Coal & Oil Co., vapour-phase cracking apparatus [for hydrocarbon oils], (P.), B., 521. Expander for cracking hydroearbon oils, (P.), B., 645.

See also Bataafsche Petroleum Maats., and Pfau, G. M.

Zublin, J. A., [application of] protective coating of carbides [to tools], (P.), B., 53. Apparatus for fusing metals, (P.), B., 147. Improving the wear-resistant qualities of a body; [case-hardening steel drills for oil wells], (P.), B., 1070. Zucker, T. F. See Simons, E. J. H.

Zuckerkandl, F., anti-fluorescent action of human serum on some fluorescein salts, A., III, 337.

See also Fiessinger, N.

Zuckerman, S., inhibitory effect of testosterone propionate on experimental prostatic enlargement, A., III, 75. Cyclical fluctuations in cestrin threshold, A., III, 229. Menstrual cycle of the primates. X. Æstrone threshold of uterus of Rhesus monkey. XI. Part played by estrogenic hormone in the menstrual cycle, A., III, 401. Inhibition of menstruation and ovulation by means of testosterone propionate, A., III, 492. See also Fisher, R. B., Krohn, P. L.,

and Ranson, R. M.

Zuehlke, A. A., and Ingersoll, L. R., dependence of the Kerr electro-optic effect on temperature for carbon disulphide and Halo-wax oil, A., I, 601.

Zühlke, E., identification of dyes on cotton, B., 336.

Zürcher, W. F. See Fierz-David, H. E. Zürn, A. See Waters, L. Zürrer, T. See Treadwell, W. D.

Zuffanti, S., fixation of nitrogen, A., I, 268.

Zukerman, V. A., collapsible X-ray tube and vacuum table for structural and spectral analysis, A., I, 534.

Zummo, C. See Artom, C.

Zumstein, R. V., Gabel, J. W., and McKay,
R. E., ¹Σ*—¹Σ band system of ionised cadmium deutcride, A., I, 216.

Znñiga, H. G., working-up by flotation as an exponential function of time, B., 571. Zunz, E., Bonnyns, R., and Gillo, L., effect of parathyroid extract on surface tension of plasma, its fibringen content,

and the protein present as globulin,

A., III, 336.

and Vesselovsky, O., action of the two optical isomerides of 3-diethylaminomethylbenzdioxan on aqueous diuresis, A., III, 134. Effect of various hormones on blood-glutathione. I. Adrenaline and cortin. II. Insulin and vagotonin, A., III, 436, 492.

Žuravlev, S. See Kubelka, V. Zurbrügg, E. See Zeerleder, A. von.

Zurukzoglu, S., and Mündel, O., relationship between cholesterol and vascular sclerosis, A., III, 215.

Zussman, H. See Wald, G. Zuverkalov, D. A., and Krasov, V. M., dependence of bacterial growth on nature of nitrogen-containing constituents of the medium, A., III, 145.

Zuydewijn, E. de R. van. See Böeseken, J., and Verkade, P. E.

Zvanut, F. J., Missouri halloysite, B., 549.
and Wood, L. J., X-ray investigation
of pyrochemical changes in Missouri

halloysite, B., 1051.
Zvenigorodskaja, V. M., and Gotsdiner, R. G., distillation method of determination of chlorides, A., I, 324. Determination of chlorine in silicates, A., I.

Zverev, V. S. See Alimarin, I. P. Zverev, V. V., bile stimulants, A., III, 424. Zvereva, V. Seo Moschkin, A.

Zvjagintzev, O. E., osmiridium. I, 102. Aurosmiridium, A., I, 384.

and Pisarshevskaja, E. L., action of sulphide minerals on solutions of gold and platinum salts, A., I, 156. Native copper of the Allaverdi [Armenia], A., I, 636.

Zvorikin, A. J. See Dombrovskaja, N. S. Zvorikina, V. C. See Rodionev, V. M. Zvorykin, I. A. See Nevros, K. I. Zwarenstein, H., experimental induction

of ovulation with progesterone, A., III, 102. Gonadotropic activity of amphibian anterior pituitary, A., III, 491.

Zweifel, B. See Santi, R.

Zwemer, R. L., and Truszkowski, R., factors affecting human potassium tolerance, A., III, 176. Importance of cortico-adrenal regulation of potassium metabolism, A., III, 400.

See also Detwiler, S. R., and Truszkowski, R.

Zwieky, J., filters, (P.), B., 857, 1289.

Zwieg, W., and Kossendey, F., gas-meter condensates, B., 1002.

and Mees, W., control of tar extractors, B., 515.

Zwikker, C., molecular-theoretical treatment of surface tension, A., I, 512. See also Kosten, C. W.

Zwilgmeyer, F. See Du Pont de Nemours & Co., E. I.

Zwilling, A., judgment of freshness of meat, B., 182.